PORT OF LIVERPOOL.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

TO THE

PORT SANITARY AUTHORITY.

FOR THE YEAR

1923.

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INDEX.

PORT SANITARY AUTHORITY

OF

LIVERPOOL.

REPORT FOR THE YEAR 1923,

BY THE

MEDICAL OFFICER OF HEALTH.

In accordance with the duty imposed by the Local Government Board in the General Order dated March 23rd, 1891, the following Report of the operations of the Liverpool Port Sanitary Authority for the year 1923 is herewith submitted.

The Report covers the work of the Authority during the year 1923, including references to the following :—

(*a*) Measures adopted under the Cholera, Plague and Yellow Fever and Allied Order of the Local Government Board.

(*b*) Measures taken to ascertain and deal with any infectious diseases existing on board vessels entering the Port of Liverpool or which have occurred during the voyage.

(*c*) The measures taken to reduce the number of rats on dock-quays and on ships and to ascertain the existence of plague amongst any such rats.

(*d*) Action taken in regard to the sanitation of vessels.

(*e*) The inspection of imported goods under the orders of the Local Government Board.

(*f*) The Medical Inspection of Aliens under the Aliens Order, 1919.

The limits of jurisdiction of the Port Sanitary Authority are those of the Customs Port of Liverpool as defined in the Treasury Warrant of November 3rd, 1896, which are follows :—

> From the Red Stones in Hoylake on the Point of Wirral and continued up the river Mersey on the Cheshire shore to the Western side of the entrance to the Manchester Ship Canal at Eastham. Thence in an easterly direction across the said entrance and along the Cheshire shore of the river to the Ince Ferry, the western termination on that shore of the Port of Manchester. Thence crossing the said river Mersey in a supposed straight line to Dungeon Point, being the western termination on the Lancashire shore of the said Port of Manchester, and continued along the coast of the County of Lancashire to the southern boundary of the Port of Preston, *i.e.*, an imaginary line drawn in a true north-north-west direction from the inner north-west sea-mark on the beach at Formby Point. And the said Port shall include all islands, rivers, bays, channels, roads, bars, straits, harbours, havens, streams, and creeks (except the said Manchester Ship Canal) within the said limits contained, and shall extend sea-ward to a distance of three miles from low water-mark along the coast within the aforesaid limits.

The contributing Riparian Authorities are the Urban Sanitary Authorities of Birkenhead and Bootle and the Urban District Councils of Bromborough, Lower Bebington and Wallasey.

The method of advising the Port Sanitary Authority of the arrival of a ship from an infected port or with dangerous infectious disease on board is as follows :—

Every pilot is provided with a small card in book form, a facsimile of which is reproduced below.

Instructions to Pilots.

1. Upon boarding all inward bound vessels the Pilot must ask the Master the following questions :—

(*i*) *Are you all well on board?*

(*ii*) *Have you called at Bombay, Calcutta, Karachi, etc., mentioning ALL the ports shown on the opposite page.*

2. If the Captain reports that he has called at any of these ports, the Pilot *must report Formby Ship for the doctor*, and must, *before* passing Formby Ship, shew the Quarantine Flag by day, and the Quarantine Light by night.

3. The Quarantine Flag and Light are not to be used except by vessels requiring the Port Medical Officer.

4. The boarding station is between the Princes Landing Stage on the Lancashire side, and the Alfred Dock on the Cheshire side, and between Salisbury Dock on the Lancashire side and Egremont Ferry on the Cheshire side.

Note.—These instructions are intended for the guidance of Pilots, and to facilitate the clearance of vessels. They will not interfere in any way with the duties of the Officers of H.M. Customs.

PORT SANITARY AUTHORITY,

LIVERPOOL.

Infected Ports.

(*Here a list of Infected Ports is given.*)

The list of ports is from time to time amended according to the prevalence of plague, cholera, and yellow fever in different parts of the world. In case of any alteration an amended list is supplied, which can be pasted in the booklet over the previous list.

TABLE 1.

AMOUNT OF SHIPPING ENTERING PORT SANITARY DISTRICT DURING THE YEAR.

	Number.	Tonnage.	Number Inspected		Number reported to be defective.	Number of Orders issued.
			by Medical Officer of Health.	by Inspectors of Nuisances.		
	(1)	(2)	(3)	(4)	(5)	(6)
Foreign—						
Steamers ...	6,898	12,615,206	716	3,946	529	—
Sailing ...	65	17,357	—	—	—	—
Fishing ...	—	—	—	—	—	—
Total—Foreign	6,963	12,632,563	716	3,946	529	—
Coastwise						
Steamers ...	9,270	2,519,031	27	1,367	44	—
Sailing ...	366	39,020	—	47	—	—
Fishing ...	—	—	—	—	—	—
Total—Coastwise	9,636	2,558,051	27	1,414	44	—

* Figures in column 1 and 2 supplied by H.M. Collector of Customs for the Port.

Infectious Diseases.

The methods adopted in the Port of Liverpool for preventing the importation of infectious disease are as follows :—

The Port Sanitary Authority, from time to time, declare certain ports to be "infected" places on account of the prevalence therein of dangerous infectious disease. A list of these ports is given to each pilot and to the Officers of H.M. Customs (see page 5). Every vessel coming from foreign ports to Liverpool must take on a Mersey Pilot, who usually boards the vessel off Point Lynas, N.E. of Anglesey, some 50 miles from Liverpool. As soon as possible after boarding the Pilot asks the Master of the vessel if he has called at any of the places on the list of infected ports or whether he has, during the voyage, had any case, or suspected case, of infectious disease on board. If the reply is in the affirmative, the Pilot orders the hoisting of the Quarantine flag by day, or the Quarantine light by night, then sends a wireless message to the Telegraph Department of the Mersey Docks and Harbour Board, who pass the information by telephone to the Stage Master's Office at either the Prince's, Woodside, or Wallasey Landing Stages, at one or other of which the Port Sanitary Launch lies when not actually visiting ships in the river. The Master or Mate of the Launch then communicates the message to the Medical Officer on duty. This information gives about three hours' notice of the expected arrival of a ship requiring medical inspection. But on account of possible delay to the ship between Point Lynas and Liverpool, or miscarriage of the wireless message from the ship, the pilots of vessels requiring inspection are also instructed to report Formby Lightship for the doctor. Formby Lightship is some ten miles down the channel, and is now in direct wireless communication with the Telegraph Department of the Mersey Docks and Harbour Board. Messages are thence passed to the launch as already described.

In addition to these sources of information, some shipping companies notify the Port Sanitary Authority by telephone or in writing of the expected time of arrival of any of their ships from infected ports. The Customs Officers also communicate with the Port Sanitary Authority if they discover a ship in the river which, through some misunderstanding, has failed to report either direct by wireless or through Formby Lightship. There are thus several sources of information available to the Medical Officer, but if delay and inconvenience to shipping is to be

avoided it is essential that accurate information should be received some time before the vessel is able to enter the docks. The Officers of the Port Sanitary Authority make every effort to give prompt attention and welcome accurate information from any reliable source.

On boarding a vessel the Medical Officer presents to the Master a questionaire, which he must fill up and sign. The crew and passengers are then mustered and medically inspected. It may appear to the layman that such a superficial examination is useless, but, carried out by a Medical Officer who knows what he is looking for, it is unlikely that any serious infectious condition will be missed. On large passenger vessels carrying a surgeon the questionaire is filled up by him and the inspection of everybody on the ship by the Medical Officer is only carried out when circumstances make it desirable that this should be done. The old system of Quarantine, which invited evasion and deceit, has long since disappeared in this country, and at the present time both masters and ships' surgeons realise that they will receive assistance rather than hindrance from Port Medical Officers, and are only too glad to shift the burden of responsibility to other shoulders if they have any suspicious sickness on board. When the Medical Officer has completed his examination and is satisfied that all is well he gives a certificate that he has examined the ship and that she may proceed to dock. The large transatlantic passenger liners are also visited on arrival by one of the Port Medical Officers, who sees the ship's surgeon and puts questions as to the health of the passengers and crew. Vessels bound for Manchester and requiring Medical Inspection are also dealt with by the Liverpool Port Sanitary Authority before proceeding to the Manchester Ship Canal.

Any cases of the more serious infectious diseases, such as Plague or Smallpox, are, as far as possible, conveyed by the Port Sanitary Launch to the Port Sanitary Hospital at New Ferry, being landed at a jetty which runs down to the water. Cases of the more common infectious diseases, such as Scarlet Fever, Measles, etc., are sent to one or other of the Liverpool City Infectious Disease Hospitals. The Masters of all vessels from infected ports and all vessels in which Smallpox or Plague has occurred must provide the Port Sanitary Authority with a complete list of the passengers and crew, giving the address to which each person is proceeding after landing. This enables contacts to be kept under

surveillance when necessary, as the information is forwarded to the Medical Officers of Health of the districts concerned. It is also of great assistance in regard to arrivals from ports where Smallpox is prevalent but from which vessels arrive at Liverpool within the incubation period of that disease.

The control over imported infectious disease is thus very nearly complete. Though the system of inspection is less rigid than in some other countries, results shew that it is efficient in protecting these Islands from sea-borne infection. By encouraging the masters and surgeons of vessels to look upon the Port Sanitary Officers as friends who will assist them, and relieve them of responsibility in regard to any case of sickness on board, better results are obtained than would be the case under a rigid system of inspection of all ships, regardless of delay and inconvenience, backed up by the imposition of heavy penalties for the least infringement of regulations.

The ideal of Port Sanitary Administration is complete protection against imported communicable disease without interference with the freedom of trade. As knowledge of the etiology of infectious diseases increases it becomes possible to attain more nearly to this ideal. But Port Sanitary Administration must maintain the closest possible co-operation with the General Public Health Administration of the interior of the country, and it is this co-operation, combined with the very complete organisation of the Public Health Service of the United Kingdom, which enables the work of our Port Sanitary Authorities to give such satisfactory results with far less irksome restrictions on shipping than are deemed necessary in some other parts of the world.

Plague.

No cases of human Plague arrived in Liverpool during the year, nor was there a single case of importation of rodent plague.

All vessels from ports where human or rodent plague is known or suspected to exist are visited by the Rat Catchers and Rat Searchers of the Port Sanitary Authority. Rats are caught on board and a careful search is made for dead rats amongst the cargo and in every part of the ship. Similar attention is systematically given to the docks, quays and sheds. Any rats so obtained are sent to the City Bacteriologist for

examination, after immersion in paraffin to kill fleas. Of 5,629 rats obtained from ships and 1,460 obtained from quays and sent for bacteriological examination not one was found to be infected. In cases where dead rats are found and in spite of a negative report from the Bacteriologist, there is the least suspicion that plague may have been the cause of death the rats are forwarded to the City Analyst, who examines for poison, the finding of which clears up any doubt in the matter.

There is no doubt that the careful attention (described elsewhere in this Report) which is given to the elimination of rat harbourage on the dock estate is of the greatest value in keeping the Port free from Plague infection.

Smallpox.

Four cases of Smallpox were landed from vessels arriving in Liverpool during the year.

S.S. "Oak Branch."

This vessel arrived at Liverpool on April 26th, from the West Coast of South America, via the Panama Canal. Two cases of smallpox had been landed at Colon, where all the crew were vaccinated. On arrival at Liverpool another case was reported. The vessel was boarded by the Assistant Port Medical Officer, who confirmed the diagnosis in the reported case, and during his examination of the crew discovered a missed case of smallpox so mild that the patient, a fireman, had worked all through the illness and had not been isolated. These two cases, together with the galley boy, who had attended the sick man, and who was not well on arrival, were removed to the Port Sanitary Isolation Hospital at New Ferry. The galley boy did not develop smallpox. Of the crew of 43, 37 whose vaccinations at Colon had not been successful, were revaccinated. There were no further cases of the disease.

S.S. "M. J. Hedley."

This vessel, a small coasting steamer, arrived off Garston on May 6th, 1923. One of the crew went to a medical practitioner at Garston, who

reported the case to the Medical Officer of Health as suspected smallpox. The diagnosis was confirmed, and the patient removed to New Ferry Hospital. The vessel was visited in the river, five of the crew of nine were vaccinated, four refusing. All names and addresses were obtained, and the necessary disinfection carried out. The disease was probably contracted at Gloucester, which the patient had visited on April 19th, and where he had been in contact with his sister, who was suffering from supposed chickenpox.

S.S. "Craftsman."

This vessel arrived at Liverpool from Rangoon, via Rotterdam, on May 7th, 1923. The chief steward had suffered from smallpox during the voyage, and gave rise to three secondary cases, which were removed to hospital at Rotterdam, where all the crew were vaccinated. On arrival at Liverpool the crew were inspected, and the chief steward, who had not been removed to hospital at Rotterdam, was taken to the Port Sanitary Hospital, New Ferry, because the eruption was still present on the soles of the feet. Revaccination was offered in all cases where the Rotterdam vaccination had been unsuccessful. Disinfection of infected quarters and bedding was carried out, and no extension of the disease occurred.

Six ships arrived in Liverpool during the year from which cases of smallpox had been landed abroad. Special care was taken in each case to see that there was no infection on board at the time of arrival, and that disinfection had been thoroughly carried out.

The following table is of interest as shewing the constant importations of smallpox into a large seaport and the consequent developments in the City. Liverpool experiences the danger of the spread of smallpox by general passenger traffic, as in the case of inland centres, but in addition it runs the risk of importation of smallpox by sea. The risk of infection is still further increased through Liverpool being associated with a large influx of outward-bound emigrants of all nationalities as well as from the traffic of crews resident in other areas joining their vessels in Liverpool :—

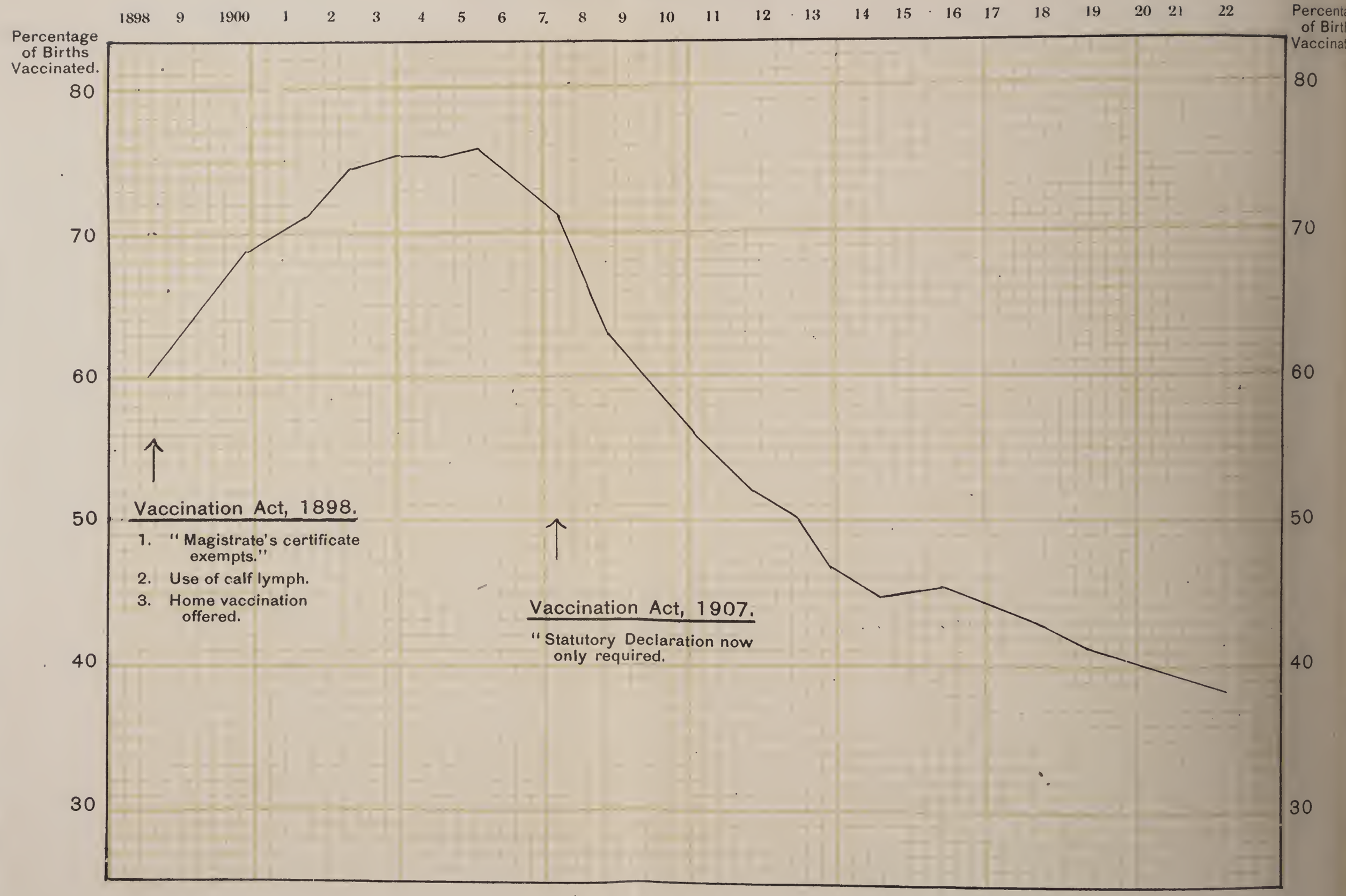
Year.	Imported by Sea or Overland.	Reported in the City.	Removed to Hospital.	Percentage Removed.
1881	16	246	199	79·95
1882	7	60	56	83·58
1883	12	114	105	83·33
1884	11	821	743	89·30
1885	11	364	342	91·2
1886	2	232	215	91·88
1887	2	21	23	100·0
1888	9	18	19	73·73
1889	8	1	8	88·88
1890	2	—	2	100·0
1891	10	11	21	100·0
1892	10	167	177	100·0
1893	12	63	73	97·33
1894	6	223	227	99·12
1895	7	130	117	98·15
1896	7	3	10	100·0
1897	2	4	6	100·0
1898	9	8	16	94·11
1899	6	4	10	100·0
1900	32	124	154	98·71
1901	20	17	37	100·0
1902	A considerable outbreak occurred in the City during 1902 (560 cases) and 1903 (1720 cases) the vast majority of cases were due to infection from persons, or things within the City and coincident with an outbreak in the country generally rather than fresh importations by sea or overland.			
1903				
1904	7	20	27	100·0
1905	6	9	15	100·0
1906	9	10	19	100·0
1907	4	15	19	100·0
1908	5	2	7	100·0
1909	6	3	9	100·0
1910	4	6	10	100·0
1911	17	2	19	100·0
1912	2	2	4	100·0
1913	12	1	13	100·0
1914	2	—	2	100·0
1915	—	—	—	—
1916	7	—	7	100 0
1917	1	2	3	100·0
1918	2	—	2	100·0
1919	7	13	20	100·0
1920	4	6	10	100·0
1921	—	—	—	—
1922	2	2	4	100·0
1923	4	1	5	100·0

Vaccination in England and Wales.

The Vaccination Acts of 1898 gave effect to certain of the resolutions of the Royal Commission on Vaccination. The following were amongst the recommendations :—

ENGLAND AND WALES (INCLUDING LONDON).

Chart showing the rise in per centage of Births Vaccinated following the Act of 1898, and the subsequent marked fall after the passing of the Act of 1907.



1. The vaccination of children in their homes instead of being compelled to bring them to a Station to be vaccinated by the Public Vaccinator.
2. The use of glycerinated calf lymph was substituted for the arm-to-arm vaccination previously in vogue.
3. A parent who conscientiously believed that the operation of vaccination would be prejudicial to his child's health might escape the penalty under the Act by satisfying two Justices of the Peace, or a Stipendiary Magistrate, of his conscientious belief.

On the subject of granting certificates, the views of Justices as to the powers and duties were at variance, and there was considerable difficulty in administering the Act.

The vaccination of children in their homes, and the opportunity of obtaining glycerinated calf lymph, however, stimulated vaccination for a time.

In 1907 another Act was passed, which gave the conscientious objector greater facility in obtaining his exemption, it only being necessary, under this Act, for him to make a statutory declaration of his objection before a Commissioner of Oaths, and pay the usual fee of a few shillings. If he sent this, within seven days, to the Vaccination Officer he was free from all further compulsion.

The effect of these Acts is well shewn in the Chart appended. The effect of the 1907 Act on births vaccinated was the opposite of the Act of 1898. The percentage of births vaccinated in 1906 was 73·4 per cent., in 1907 it was 70·9 per cent., in 1908 it was 62·2 per cent., and in 1920 it reached the deplorable figure of approximately 40·0 per cent. of the children born, vaccinated in England and Wales.

Experience has shewn that there is very little real objection to vaccination in this country. It mainly rests with the mothers, who really concern themselves very little as to its protective value against smallpox. In the absence of epidemic smallpox the need of protection is not realised. The recent experience in Glasgow in 1920 and in other centres, shews that when the disease takes on an epidemic character the people flock in thousands to be vaccinated, but in many cases too late to acquire the necessary protection.

Liverpool is said to be well vaccinated, and this is a matter for congratulation, seeing that it is an important seaport, and the danger of the importation of smallpox amongst the community requires a constant watchfulness on the part of the Public Health Authorities.

Cholera and Typhus Fever.

No cases of either of these diseases was brought into Liverpool during the year. The great care taken by the U.S. Public Health Authorities in regard to immigrants from Central Europe, a great number of whom pass through this country on their way to America, undoubtedly obviates the risk of the introduction of infection from this source.

Tables shewing the number of cases of the notifiable infectious diseases which were landed at Liverpool,and also which were landed abroad from Liverpool-bound ships are given on pages 38 and 39, where the numbers can be compared with the average for the preceding five years.

Anthrax.

During the year 588 samples of wool and hair, etc., were examined for the Government Wool Disinfecting Station—two samples of each material were sent, one before, and the other after, disinfection—seven of the untreated samples were found to be infected with Anthrax Bacilli, but all the disinfected ones were quite sterile.

Twelve samples of hides and hair, etc., were examined for the Port Sanitary Authority, one of these, from the s.s. "Thessaly," showed the presence of Anthrax Bacilli.

Of the above specimens examined by the City Bacteriologist—

1 Sample of Hides was contaminated with Anthrax Bacilli.
1 ,, Run Wool ,, ,, ,,
5 Samples of Hair were ,, ,, ,,

All the specimens of wool hair examined after treatment at the Government Wool Disinfecting Station were found to be sterile, and guinea pig inoculations showed no evidence of Anthrax Bacilli.

TABLE 2.

STATEMENT OF THE NUMBER OF VESSELS ARRIVING INFECTED OR SUSPECTED WITH PLAGUE AND FROM INFECTED PORTS, TOGETHER WITH PARTICULARS OF THE MEASURES OF RAT DESTRUCTION AND THE EFFECTS OF SUCH MEASURES DURING THE YEAR.

Number of Vessels arriving in the Port Sanitary District.			Number of Vessels subjected to Measures of Rat Destruction.				Measures employed.	Effects of these Measures.	
Plague infected.	Plague suspected.	From infected Ports.	Plague infected.	Plague suspected.	From infected Ports.	Other Vessels.		On Rats—Number killed.	On Cargo.
—	—	*471	—	—	394	302	Searching, Traying, and Trapping.	6,572	None (Vessels only fumigated when empty).
							Fumigation by SO_2 and by H.C.N.	5,525	

*Including 77 Manchester bound vessels.

TABLE 3.

Table showing the number of Rats obtained on ships and quays by the Authority's rat-catchers.

Year.	NUMBER OBTAINED.			NUMBER EXAMINED.			NUMBER DESTROYED.		
	From Ships.	From Quays.	Total.	From Ships.	From Quays.	Total.	From Ships.	From Quays.	Total.
1914	10,083	944	11,027	5,264	917	6,181	4,819	27	4,846
1915	9,400	1,256	10,656	6,204	1,234	7,438	3,196	22	3,218
1916	10,881	1,678	12,559	7,064	1,312	8,376	3,817	366	4,183
1917	9,174	1,551	10,725	6,379	1,457	7,836	2,795	94	2,889
1918	7,251	1,188	8,439	5,541	1,159	6,700	1,710	29	1,739
1919	8,971	1,336	10,307	6,023	1,287	7,310	2,948	49	2,997
1920	8,088	1,593	9,681	5,276	1,517	6,793	2,812	76	2,888
1921	8,867	2,405	11,272	5,031	2,195	7,226	3,836	210	4,046
1922	10,642	2,830	13,472	5,520	2,519	8,039	5,122	311	5,433
1923	*12,097	1,625	13,722	5,629	1,460	7,089	6,466	167	6,633
Total.....	95,454	16,406	111,860	57,931	15,057	72,988	37,521	1,351	38,872

* 5,525 of these were obtained after fumigation and 158 mice are also included in these figures.

TABLE 4

CITY AND PORT OF LIVERPOOL.

RETURN OF RATS CAUGHT, EXAMINED OR DESTROYED.

Date.	City.				Port				City.		Port.		Total Caught
1923.	Warehouses, Stores, &c.	Sewers.	Other Sources.	Total.	Ships.	Quays.	Other Sources.	Total.	Examined.	Destroyed.	Examined.	Destroyed.	(City and Port.)
January	393	569	459	1,421	1,399	87	63	1,549	224	1,197	742	807	2,970
February	386	486	470	1,342	802	112	131	1,045	232	1,110	649	396	2,387
March	403	439	438	1,280	697	71	169	937	248	1,032	529	408	2,217
April	264	542	416	1,222	978	117	55	1,150	231	991	547	603	2,372
May	428	555	525	1,508	684	99	28	811	242	1,266	492	319	2,319
June	575	492	527	1,594	979	97	28	1,104	246	1,348	551	553	2,698
July	471	611	517	1,599	662	45	8	715	236	1,363	484	231	2,314
August	264	562	672	1,498	701	81	6	788	197	1,301	514	274	2,286
September	272	714	605	1,591	825	52	11	888	262	1,329	627	261	2,479
October	419	616	732	1,767	1,236	88	46	1,370	270	1,497	735	635	3,137
November	328	799	550	1,677	1,954	96	42	2,092	213	1,464	683	1,409	3,769
December	276	537	521	1,334	1,180	48	45	1,273	124	1,210	536	737	2,607
	4,479	6,922	6,432	17,833	12,097	993	632	*13,722	2,725	15,108	†7,089	6,633	31,555

* Including 158 mice.

† Including 68 mice.

TABLE 5.

STATEMENT OF THE RATS CAUGHT MONTHLY BY THE PORT SANITARY STAFF, THEIR VARIETY AND NUMBERS EXAMINED.

Number of	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Black Rats ...	1,462	977	772	997	714	979	675	755	852	1,293	2,031	1,256	12,763
Brown Rats ...	75	62	160	107	66	85	38	29	34	67	61	17	801
Rats Examined	734	643	524	539	478	542	482	510	625	725	683	536	7,021
Rats Infected with Plague ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Rats Not Infected ...	734	643	524	539	478	542	482	510	625	725	683	536	7,021

TABLE 6.

The combined returns of all rats and mice caught and destroyed by shipping firms employing their own rat-catchers, by rat-catching companies, and by the Public Health Authorities, are as follows:—

	Rats.	Mice.	Rats.	Mice.
PORT—				
On vessels	49,698	119		
On quays	1,586	39		
			51,284	158
CITY—				
In warehouses	4,477	2		
In sewers and from other sources ...	13,291	63		
			17,768	65
		TOTAL ...	69,052	223

Number of Visits to **Vessels** by Rat Catchers	3,652
Do. do. do. Rat Searchers	4,197
Do. do. **Quays, Sheds, etc.,** by Inspectors ...	603
Do. do. do. do. Rat Searchers	124
Do do. do. do. Rat Catchers	3,723

Fumigation of Ships.

During the year 1923 ninety ships were fumigated in the Port of Liverpool for rat destruction. Searching of ships after fumigation resulted in the collection of 5,525 dead rats, giving an average of about 60 rodents killed per fumigation. It appears an expensive procedure to fumigate a whole ship in order to kill on the average 60 rats. But under favourable conditions rats multiply at an enormous rate, for the average number of young rats in a litter is 6 to 8, and the female rat produces 5 or 6 litters annually. Moreover, the female rat is sexually mature when less than three months old, and the period of gestation is about 21 days. Indeed, it has been calculated that one pair of rats may in nine months give rise to a progeny of 880. The value of the periodical fumigation of ships must therefore not be judged by the average number of rats killed; in fact, were that average number to reach a high figure, it would indicate that more frequent fumigation was necessary. The object of regular fumigations is to keep down to a mimimum the rat population of ships, partly to reduce damage to cargo, partly to prevent the importation of rats to swell the already serious number of rats in the country, and partly to reduce the chances of the importation of plague, for just as infectious disease amongst human beings spreads most rapidly amongst overcrowded communities, so does plague spread most rapidly and most widely amongst a dense rat population. Fumigations should therefore be required at such intervals as are necessary to keep down the rats on board to very small numbers. This interval would vary with such factors as the age and construction of the ship, the foreign ports traded with, and the nature of the cargo. It is not an easy matter to treat all ships according to their deserts in this respect, consequently the United States and Canada have fixed six months as a standard for practically all ships. In this country there is no legislation requiring fumigation of ships at regular intervals, but under the Rats and Mice Destruction Act of 1919 the Master of a ship is placed in the same position as the occupier of land, and is required to "take such steps as may from time to time be necessary and reasonably practicable for the destruction of rats and mice," and is also required to take steps for preventing the escape of rats and mice from his ship. In pursuance of this policy all shipowners in the Port of Liverpool employ rat catchers, who operate on their ships in the port, rat-guards are required on mooring ropes, and finally the rat catchers and rat searchers of the Port Sanitary Authority

are required to examine ships carefully for evidence of the degree of rat infestation. If they find evidence that there are numerous rats on board, this information is communicated to the shipping company, with an intimation that the vessel should be fumigated throughout for purposes of rat destruction.

It is hardly necessary to state that in any case where plague or suspected plague, human or rodent, is discovered the vessel is fumigated immediately by and at the expense of the Port Sanitary Authority.

Of the 90 ships fumigated in Liverpool during the year, 85 were treated with sulphur dioxide generated by burning sulphur in open pots. The other five ships were fumigated by means of hydrocyanic acid gas produced by pouring a saturated solution of sodium cyanide in water down tubes into barrels below containing sulphuric acid. This method was very successful in destroying not only rats, but also bugs, cockroaches, steam flies, etc., but unfortunately, in one instance, a fatal accident occurred, the circumstances of which are recorded as being of value in drawing attention to a hitherto unsuspected danger.

On the 10th December, the s.s. "Barrymore" was fumigated with HCN generated as already mentioned by pouring a saturated solution of sodium cyanide into barrels containing sulphuric acid. The vessel was under fumigation by 11 a.m., and was opened out at 1 p.m. After ventilation the vessel was tested in every part by the Assistant Port Medical Officer on duty, who, after satisfying himself by testing with live rats that the gas had cleared, personally entered all the compartments which had been under fumigation, before issuing a certificate that the vessel was clear of gas in dangerous quantities. The removal of the generating barrels had not given any trouble after previous fumigations, but the Medical Officer, when down in the forepeak, a very small space, had observed that one barrel appeared rather awkward to remove, and as it contained a strongly acid solution he decided to supervise personally its removal. One of the fumigating staff went into the forepeak to work under the direction of the Medical Officer, who remained immediately above him in the upper peak. A rope was passed through the eyes in the top of the barrel, and the man then started to work the barrel over the ropes in the floor of the forepeak towards the hatch. In doing so he upset the barrel and poured about half its contents on to the floor. The Medical Officer shouted to him to come out, but as he

reached the ladder he fell unconscious. The Medical Officer went to his assistance, but was also overcome, as were also an Inspector of the Port Sanitary Authority and the Second Officer of the ship, who succeeded in rescuing the Medical Officer, but not the other man, he being eventually brought up by a fireman of the Bootle Fire Brigade. In spite of continuous artificial respiration for six hours the man died. The other men who had been overcome all recovered completely. The cause of the accident was undoubtedly a regeneration of gas due to agitation of the contents of the barrel when it was upset. The space in the forepeak had been quite clear, for after careful testing with rats the Medical Officer had himself been in the space for five minutes immediately before the work of removing the barrel commenced. Further, the member of the fumigating staff was working at the barrel for some time, and was quite unaffected until the contents were spilled. It would appear that sometimes the reaction between the sodium cyanide and sulphuric acid is not complete, particularly when the solutions are both cold before mixing. Agitation of the liquids causes a further reaction, and in the small space of the forepeak a very poisonous concentration was produced in this instance. No similar accident has been reported before, but since the Liverpool accident an expert chemist and his assistant were both killed in Antwerp, after upsetting a generating barrel 24 hours after the fumigation was over.

The prevention of such a misfortune in the future lies in care as to the position and subsequent handling of the generating barrels, which should only be removed by men wearing efficient respirators.

Another method, which leaves no residue for removal, and so obviates this particular danger, is the use of liquid hydrogen cyanide, the liquified gas being pumped from metal containers through a spray into various sections of the ship. The liquefied gas volatilises very rapidly and fills the spaces treated. The operation of this apparatus is very simple and requires a very small fumigating staff. The results appear to be very satisfactory, and labour, apart from that necessary in closing up the vessel, is reduced to a minimum.

The U.S.A. are now using cyanogen chloride gas mixture, the cyanogen chloride being lachrymatory and giving warning of danger before lethal concentrations are present. The dangers of accident are thereby greatly reduced. The method has not yet been used in this country, but its development will be watched with great interest.

Rat Proofing.

The periodical fumigation of ships, the trapping and poisoning of rats, and the use of rat-guards on mooring ropes are all valuable means of reducing the numbers of rats in the port. But the only permanent effective measures against rats are those which eliminate rat harbourage on the dock quays and sheds. If the rats are presented with an acute housing problem and a high cost of living they cannot multiply to any great extent. A campaign on these lines is constantly waged in Liverpool with excellent results. The sheds on the quays are, with few exceptions, and those only in the oldest parts of the docks, where the traffic is coastwise, of rat-proof construction, that is to say, if the sheds are clean and empty there is no place where rats can nest. It remains, therefore, to see that no harbourage is provided amongst cargo, working gear, under huts or offices, or amongst refuse accumulating in any part of the sheds. In regard to cargo, the circumstances are favourable, as the sheds on the docks are all transit sheds, goods being landed and rapidly distributed to all parts of the country, and being replaced by cargo for outward shipments, so that there is no chance for a rat to make a nest and bring up a family amongst the cargo in the sheds. Huts and offices are all raised 18 inches to 2 feet above the level of the floor of the shed, the space beneath kept clear of refuse. In some cases the huts stand inside the sheds on a strong concrete floor, and then concrete is laid all round the bottom of the hut, so that it is impossible for rats to burrow underneath. There must necessarily be a large quantity of gear in the sheds for the working of cargo. Great care is taken to see that this gear does not provide harbourage for rats. Raised platforms are built on which tarpaulins, ropes, etc., are stowed. In many cases ropes, blocks, etc., are suspended from the walls of the

bo'sun's stores, an excellent arrangement both as a rat-preventive measure and also for the preservation of gear. Trucks, cargo skids, etc., are stored in an orderly manner, and no accumulation of refuse is permitted amongst them. Working gear which is in regular use is constantly being moved, and consequently does not provide a nesting place for rats.

Further, all parts of the sheds, particularly the corners and along the walls, are required to be kept clear of rubbish of all sorts. The roadways between the docks receive similar attention. Formerly each Sanitary Inspector dealt with the rat-proofing on his own district, but during the last year one Inspector has taken over this work for the whole of the Dock Estate. This arrangement has proved very satisfactory, as not only is a uniform standard maintained, but the Inspector knows who is the responsible person to be approached in any area where conditions are found to be not entirely satisfactory, and by revisits can make sure that the necessary work is done. There is no doubt that rat-preventive measures on the docks is of the greatest importance in maintaining the freedom of the port from rodent plague.

The shore-staffs of the majority of the shipping companies now appreciate the wisdom of rat-proofing, and any defects to which attention is drawn are quickly remedied. In this respect also the Mersey Docks and Harbour Board give every assistance to the Port Sanitary Authority.

Venereal Diseases.

The Royal Commission on Venereal Diseases reported in 1916, and made the first suggestions for grappling with these diseases. The recommendations may be summarised as follows :—

1. That opportunities should be afforded to sufferers to have free and expert treatment.

2. That extended facilities should be provided for the diagnosis of these diseases.

3. That information as to the dangers of Venereal Diseases should be disseminated and particulars as to the facilities provided for free treatment.

It is now five years since free treatment centres and arrangements for expert diagnosis were established under the Liverpool Venereal Diseases Scheme.

The following summarises the work of the Treatment Centres for the year 1923.

The Clinics now in operation are—The Royal Infirmary, the Royal Southern Hospital, the David Lewis Northern Hospital and the Stanley Hospital.

The Clinics which were established are very serviceable and popular. Patients attending the Out-Patients' Department of the Hospitals and those suffering from Venereal Diseases are directed to the Department dealing with their special ailment, and particular care is taken that such patients suffering from Venereal Disease are not singled out or made conspicuous.

During the year under review, there were 3,026 new patients, male and female, a reduction of 526 as compared with the figure for 1922. A suggested explanation of this reduction is that on account of unemployment and other industrial conditions, there was a lack of means. But apart from this, the value of efficient free treatment and education is beginning to make itself evident.

The attendances for the year at all the Clinics totalled 46,038 male and female. A table shewing attendances, etc., at each of the clinics is given, and also details of the diseases and sexes dealt with at the largest centre, namely, the Royal Infirmary.

RETURN SHOWING THE NUMBER OF **NEW PATIENTS** ATTENDING THE VENEREAL DISEASES CLINICS DURING THE YEAR 1923. ALSO **TOTAL ATTENDANCES AND IN-PATIENT DAYS** OF **OLD AND NEW PATIENTS** DURING SAME PERIOD.

	Royal Infirmary.	Royal Southern Hospital.	David Lewis Northern Hospital.	Stanley Hospital.	Total.
New Patients	1,767	583	388	288	3,026
Old and New Patients—					
Total attendances...	28,084	4,534	8,609	4,811	46,038
In-Patient Days ...	98	3,413	—	286	3,797

CLASSIFICATION OF CASES ATTENDING THE LIVERPOOL ROYAL INFIRMARY DURING 1923.

	New Cases *			Ceased to attend before Cure Completed.			Total Attendanc		
	M.	F.	Total.	M.	F.	Total.	M.	F.	To
Syphilis...	392	123	515	571	153	724	10,613	3,118	13
Gonorrhœa.....	642	62	704	679	73	752	12,187	884	13
Soft Chancre	7	—	7	5	—	5	47	—	
Suspected cases—examined and found to be free from V.D.	354	51	405	—	—	—	1,095	140	1
Total	1,395	236	1,631	1,255	226	1,481	23,942	4,142	28

* The figures in these columns include "Re-admissions," *i.e.*, old patients who had ceased attendir for more than six months.

The occupations stated to be followed by patients registered at the Clinics at the Royal Infirmary during the year are of interest :—

Males.		Females.	
Seafaring people	505	Housewives.....	111
(Of these 46 were foreign)		Home duties	12
Artizans	459	Shop Assistants	7
Miscellaneous	337	Factory Hands	1
(Clerks, Agents, Hawkers, &c.)		Housemaid	1
		Waitress	1
		Domestic servants.....	21
		Other occupations	24
	1,301		178

In addition, 134 male and 39 female patients who had ceased attending for 6 months (or longer) resumed their attendances during the year.

38·0 per cent. of the total male patients registered were seafaring people.

7·0 per cent. of the latter were not natives of the British Isles, and are classed as follows :—

U.S.A. and Canada, 4; Colonies, 4; Norway and Sweden, 15; other nationalities, 16.

The ages range approximately from 15 to over 60 years, but the majority of the patients were between the ages of 20 and 30 years, as shown by the following table, viz. :—

	Male.	Female.
10—15	—	4
15—20	46	16
20—25	349	50
25—30	389	44
30—35	221	25
35—45	220	25
45—55	70	14
55—65	12	2
65 upwards	3	2

There were 22 infants and young children under 10 years of age who attended this Clinic during the year. Past experience shows that many cases of uncertain diagnosis, and simulating syphilis, especially skin eruptions, may be incorrectly reported as syphilitic. Many of them require a more careful investigation before a definite diagnosis can be made. This has also been experienced in the past in other diseases, e.g., typhoid fever, with which disease many simulating conditions were confused. Of the above 22 infants and children only five were found to be suffering from syphilis, seven from gonorrhœa, and ten were non-venereal.

Correct diagnosis being very important, arrangements have been made with the City Bacteriologist to examine material, and the following extract from his Report gives the numbers and particulars of the specimens examined for the Liverpool Clinics, Hospitals and Private Practitioners :—

Detection of Spirochaetes	17
Detection of Gonococci	628
Wassermann Reaction for Syphilis	4,100
Still-born Infants	408
Ophthalmia Neonatorum	65
Total	5,218

As the majority of the specimens are sent from patients suspected to be suffering from Syphilis, or undergoing treatment, several specimens of blood may be sent from one case at different times, and, therefore, any percentage as to positive and negative results would be of no value.

Still-Births.—Of the 408 still-born infants examined, 33 gave positive evidence of the presence of Syphilis (i.e., about 8 per cent.), and 11 were

suspicious. In three of these suspicious cases the blood taken from the mother gave a positive Wasserman Reaction. Although the percentage of syphilitic still-born infants is lower than usual there is no direct evidence as to whether this reduction is due to treatment.

The importance of this work is very great, for where the actual causal spirochaete has been discovered the mother (and in some cases the father) can be advised to submit to treatment. The special Health Visitor also undertakes the visiting of these cases, and visits to the number of 196 were made during the year.

In many cases a visit was paid to the Clinic to obtain information with regard to the attendance of patients, thus obviating the necessity of too frequent visits to the homes of the patients.

In many instances great difficulty has been experienced in getting the mothers to attend for examination and treatment. A large number, however, have been persuaded to attend for treatment, but these women prefer to attend at hours other than those fixed in the regular Time-table; it is difficult to get those of the better class to continue attendance at regular clinics where prostitutes and other types of patients are brought together. Other arrangements to meet these difficulties are in contemplation.

Of the 65 cases of Ophthalmia Neonatorum, 16 showed the presence of Gonococcus, i.e., about 25 per cent. The importance of the examination of these cases at an early stage has been previously emphasised, and the results for this year have confirmed these observations. It is not infrequent to find no bacteria in the films, or bacteria of other types, staphylococci, pneumococci, etc.; the Bacteriologist is convinced that some of these cases are gonorrhœal in origin, but the gonococci are very few in number, the early examination making it difficult to discover them, and the early treatment preventing their development.

The following drugs have been issued to Institutions and Medical Practitioners by the Department during the year 1923 :—

ISSUE OF DRUGS TO CLINICS, HOSPITALS, AND PRIVATE PRACTITIO

Issued to	Neokharsivan.					Novarsen-obillon.				Novarseno-benzol. C.		G.	
	0·30	0·45	0·60	0·75	0·90	0·30	0·45	0·60	0·90	0·30	0·60	0·15	0·2
Royal Infirmary	957	—	1,854	—	24	—	—	—	—	32	84	—	—
Southern Hospital	144	204	276	72	312	—	—	—	—	—	—	—	—
Northern Hospital	276	72	72	—	312	—	—	—	—	—	—	—	—
Stanley Hospital	1,296	—	4	—	—	—	—	—	—	—	—	—	—
Edge Lane Hospital	12	—	36	—	—	—	—	—	—	—	—	—	—
Total Clinics	2,685	276	2,242	72	648	—	—	—	—	32	84	—	—
Children's Hospital	3	—	6	—	—	—	—	—	—	—	—	—	—
Prison Hospital	—	—	—	—	—	261	280	182	138	—	—	—	—
Walton Institution	348	276	84	84	—	—	30	—	30	—	—	—	—
Cancer and Skin Hospital ...	72	60	48	—	—	10	—	10	—	—	—	—	—
Eye and Ear Hospital ...	—	—	—	—	—	57	60	—	—	—	—	—	—
Belmont Road Hospital ...	—	—	153	—	—	—	—	—	—	—	—	—	—
Smithdown Road Hospital ...	—	—	—	—	—	—	—	—	—	—	—	8	1
Alder Hey Hospital	24	—	—	—	—	—	—	—	—	—	—	—	—
Total Hospitals	447	336	291	84	—	328	370	192	168	—	—	8	1
32 Private Practitioners	282	242	402	60	96	65	4	28	22	—	—	17	3
Grand Total	3,414	854	2,935	216	744	393	374	220	190	32	84	25	4

Total Number of Doses of Neokharsivan .
,, ,, ,, Novarsenobillon .
,, ,, ,, Novarsenobenzol .
,, ,, ,, Galyl ... .
,, ,, ,, Stabilarsan .
,, ,, ,, Sulfarsenol .

Approximately one-seventh of the drugs enumerated above h

URING 1923 FOR THE TREATMENT OF VENEREAL DISEASES.

	Stabilarsan.					Sulfarsenol.											
0·40	0·30	0·45	0·60	0·75	0·90	0·015	0·02	0·03	0·06	0·12	0·18	0·24	0·30	0·36	0·42	0·48	0·54	0·60
—	30	310	230	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	4	4	4	4	4	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	1	—	3	29	3	267	9	8	119	3	—
—	—	—	—	—	—	—	—	—	—	30	30	30	30	60	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	6	6	—	6	4	—
—	34	314	234	54	4	—	—	1	—	33	59	33	303	75	8	125	7	—
—	—	—	—	—	—	—	—	—	2	2	—	—	2	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	10	—	—	10	—	30
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	24	—	16	—	2	—	—	16	16	3	6	9	3	3	3	3	3	3
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	10	—	—	—	—	3	3	66	57	84	—	—	—	—	—	—	—	3
3	34	—	16	—	2	3	3	82	75	89	6	9	15	3	3	13	3	36
114	18	19	12	8	—	—	—	—	4	3	15	6	54	4	25	36	1	24
117	86	333	262	62	6	3	3	83	79	125	80	48	372	82	36	174	11	60

To Clinics.	To Practitioners.	To Hospitals.
5,923	1,082	1,158
—	119	1,058
116	—	—
—	237	44
640	57	52
644	172	340

ed to 32 Private Practitioners who applied for them.

The necessity for the provision of a home or hostel where young women suffering from venereal diseases could be housed during the infectious stage has been for some years recognised. Arrangements have been made with the Liverpool Diocesan Association to provide such an establishment, the Corporation to some extent financing the home under definite agreement.

The house originally taken for this work not proving satisfactory, new premises were acquired in the beginning of this year, and it is hoped that the work will now proceed under more favourable conditions. The home provides 15 beds for women of the class mentioned.

Venereal Diseases—Education.

The subject—in its various aspects—of the prevention of venereal diseases has engaged the attention of the Councils of the various Merseyside Boroughs through Committees specially appointed for the purpose, and, as a result of consultations and communications between those bodies, agreements have been reached as to the procedure which it is desirable to follow in regard to the prevention of these diseases.

The work of educational propaganda, which perhaps may have been regarded as relatively unimportant, has now been undertaken with the approval of the Ministry of Health by a Joint Committee, the members of which are appointed by the respective Merseyside Boroughs, viz., Liverpool, Birkenhead, Bootle and Wallasey.

The educational work of this Joint Committee consists in arranging lectures and other means of bringing the subject of the dangers of venereal diseases to the notice of the general public. Funds are provided by the associated Boroughs in appropriate proportions for the carrying out of this work.

Experience in Liverpool corresponds with that found elsewhere in regard to the system of free treatment centres, where no obligation is placed on persons suffering from these diseases: the patients too

frequently give up treatment when the local manifestations of the disease have subsided. Such persons frequently remain in an infectious condition, and consequently are a great danger to the public. They also lose sight of the great importance of steady continuance under medical advice at the Clinic in the cure of their dangerous ailments.

Efforts have been made in Liverpool by various means to get these patients back to continue treatment. It cannot be said that these have had much effect.

Suggestions for improvement in our methods of dealing with venereal diseases have been made some years ago by the Committees of the Liverpool Corporation dealing with these diseases. For some years it has been felt that the present schemes should be strengthened by the addition of some compulsory powers which should be given to local Health Authorities to compel the sufferer to seek a doctor's advice and to follow it should he be found to suffer from the disease. Those who, after repeated warnings, deliberately refuse treatment should be punished, and public opinion would justly agree with this course.

The powers suggested in the proposals of the Liverpool Corporation need not of necessity be used, it might be left to local Health Authorities to adopt such of them as appeared desirable for their respective areas.

If it can be brought home to the patient that it is his duty to himself and to his fellow men to follow a full and proper course of treatment until free from liability to infect others, much good will be attained.

The Liverpool Health Committee think these ends can be reached by making it obligatory for everyone who suffers, or suspects he is suffering, to seek medical advice and to follow the doctor's instructions; in no case will secrecy be betrayed, and it would only be in cases of deliberate discontinuance that prompt action would be taken by the Health Authority in the public interest.

The following is the text of the proposed clauses to be inserted in the next Corporation Bill to be placed before Parliament :—

VENEREAL DISEASES.

Duty of Person Infected.

(1) Every person suffering from any form of Venereal Disease as soon as he is aware or has reason to believe that he is suffering from such disease, shall forthwith consult a Medical Adviser with respect thereto, and shall furnish to him his correct name and address, and place himself under his treatment.

(2) Every such person shall continue to attend or be attended by his Medical Adviser, and to follow his advice and treatment until he is deemed free from infection.

(Provision to be made for change of Medical Adviser and for routine procedure in case of neglect to continue treatment.)

(3) No person shall knowingly or wilfully infect any other person with Venereal Disease or do or permit any act likely to lead to such infection.

Duty of Parent or Guardian.

Every parent, guardian or person in charge of a child (under 16 years of age) or mental defective suffering from any form of Venereal Disease, and who knows that such child or defective is suffering from such disease, shall cause the child or defective to be treated and continue treatment for such disease by a Medical Adviser.

Penalties.

Section 1 (3) of the Public Health Act, 1896, provides that if any person wilfully neglects or refuses to obey the execution of any regulation under Section 130 of the Public Health Act, 1875, he shall be liable to a penalty not exceeding £100, and in the case of continuing the offence, of a further penalty of £50 per day.

Duties of Medical Practitioner.

(1) The doctor shall direct the patient's attention to the infectious character of the disease, and to the necessity of continuing treatment until free from liability to infect, and to the penalties prescribed.

(2) To arrange for transfer to another medical adviser when the patient so desires.

(3) When a patient discontinues medical treatment without adequate reason, the medical adviser will forward his name and address to the Medical Officer of Health. In any case where a fee is not paid by the patient to the doctor, the provision for such payment shall be made on the lines which the Ministry have already authorised in Liverpool in regard to the domiciliary treatment of non-insured Tuberculous persons. Suitable forms shall be provided for the use of medical practitioners intimating the obligations upon patients—arrangements for transfer when necessary—and forms of notice to the Medical Officer of Health as to acceptance of a patient by the practitioner, and when necessary, his non-attendance.

Drugs specially necessary for treatment shall be provided free of charge to medical men as hitherto. Ordinary prescriptions shall be paid for as in the Scheme for domiciliary treatment of Tuberculosis.

Duty of Medical Officer of Health.

The Medical Officer of Health on receipt of a notice from the medical adviser in regard to any patient, shall make enquiries from the person named as to the reason for discontinuance of treatment, and unless satisfied shall cause an information to be laid in a Court of Summary Jurisdiction.

The Trevethin Committee points out that there is one practical difficulty in the way of any form of notification re-inforced by

measures of compulsory treatment, that in the present state of knowledge there is no standard of non-infectivity or cure generally accepted by the medical profession, and until this has been attained it is difficult to see how any system involving notification and compulsory means of treatment could be applied. The following quotation from the report deserves notice :—

"Notwithstanding what we have said we are of opinion that it may well be that in certain areas, special means for the prevention of venereal diseases would be justifiable, e.g., measures dealing with defaulters, and in a large seaport town public ablution centres for disinfecting in the neighbourhood of docks, and we think that Local Health Authorities who are able to make to the Ministry of Health a special case for some such special measure should be allowed, at any rate for some limited period, by way of experiment, to carry out the measures they propose under the present system, by which a contribution towards the expense is made by the State. In this way there may ultimately be built up a body of experience of great value in determining future policy."

SEAMEN'S DISPENSARY.

The efforts made to find a suitable site for a Seamen's Dispensary have now been successful, and an appropriate building has now been erected with the sanction of the Ministry of Health, at a cost of £4,649. The premises are situated in the neighbourhood of the Sailor's Home and Board of Trade Offices, and were opened by the Lord Mayor on 28th January, 1924. A whole-time Assistant Medical Officer has been appointed.

It is felt that the Institute will supply a great need in dealing with the many ailments of the seafaring community. It is the intention to deal primarily with venereal diseases at this centre, but this fact will not debar seamen suffering from other ailments, including tropical diseases, from receiving preliminary advice and treatment, and in some cases treatment.

View of the Seamen's Dispensary which was opened on 28th January, 1924, by the Lord Mayor of Liverpool

Medical Officers' Consulting Room, with facilities for Bacteriological and Microscopical investigation.

Operating Room, with modern conveniences for examination and treatment.

In the main, however, such cases will be referred to Institutions where they can be more suitably treated. The accompanying plans shows the site of the Dispensary and its relationship to the various seamen's institutions.

City and Port of Liverpool.

THE SEAMEN'S DISPENSARY

at the corner of

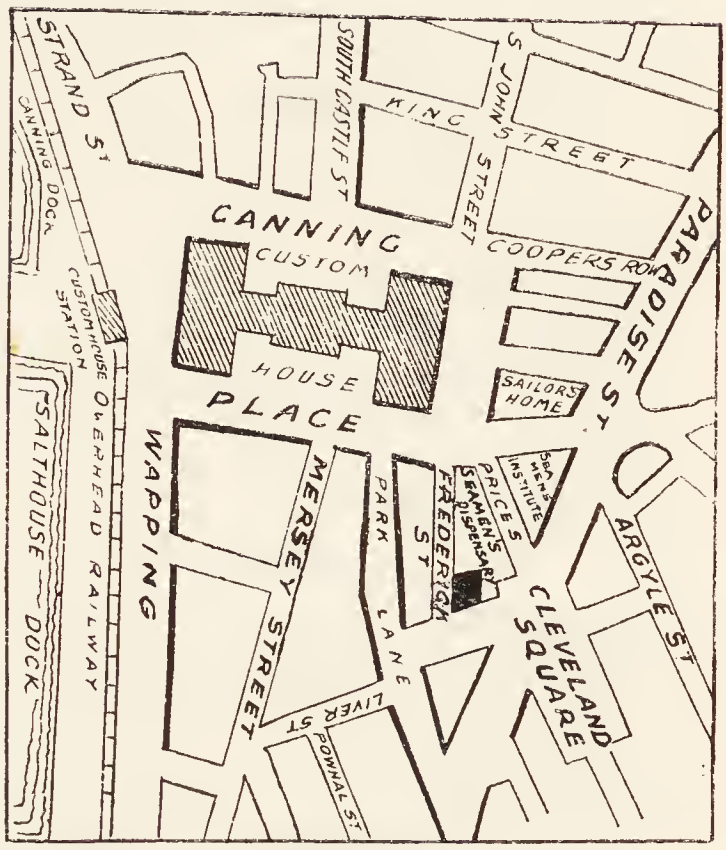
CLEVELAND SQUARE & FREDERICK ST.,

is now open for free examination and advice on the ailments of Seamen.

All patients will be medically examined and free treatment given in cases which can be dealt with at the Dispensary. All other cases, after the necessary attention, will be referred to a suitable Hospital for treatment.

The Dispensary is Open Daily from 9-30 a.m. to 8 p.m.

The hours of attendance of the Medical Officer can be ascertained at the Dispensary.



The accompanying illustrations indicate the appearance of the building and show general views of the treatment rooms, from which it will be seen that they are fully equipped for the purpose required.

TABLE 7.

INFECTIOUS DISEASE.

The actual number of cases of Infectious Sickness landed from vessels arriving in the Port of Liverpool during the years 1922 and 1923, and the comparison with the average of the preceding 5 years, is shown in the following table :—

Diseases.	Number of Cases.		Average for the 5 years preceding 1922.
	1922.	1923.	
Smallpox	2	4	2·2
Scarlet Fever	18	3	11·4
Cerebro-Spinal Meningitis	0	0	0·4
Typhus	0	0	0·1
Enteric Fever	9	4	17·2
Do. (suspected)	0	8	3·2
Diphtheria	22	10	9·4
Measles and German Measles	10	13	22·8
Erysipelas	3	3	4·6
Chicken Pox	5	15	8·6
Cholera and Choleraic Diarrhœa.	0	0	0·0
Yellow Fever	0	0	0·0
Plague	0	0	0·2
Suspected Plague	0	0	0·6
Phthisis	44	57	36·0
Tuberculosis (other forms of)	5	6	0·5
*Pneumonia and Influenza	8	22	41·0
*Malaria	24	20	45·6
*Dysentery	2	6	5·3
Encephalitis Lethargica	0	2	0·0
Totals	152	173	209·4

* Notifiable from 1st March, 1919.

TABLE 8.

INFECTIOUS DISEASE.

The number of cases of Infectious Sickness reported to have occurred on Liverpool-bound ships during the years 1922 and 1923, and which were disposed of prior to the arrival of the vessel at this port, and the average of such cases for the preceding 5 years, are as follows :—

Diseases.	Number of Cases.		Average for the 5 years preceding 1922.
	1922.	1923.	
Smallpox	4	10	11·8
Scarlet Fever	0	3	1·2
Cerebro Spinal Meningitis	0	3	1·4
Enteric Fever	10	10	9·8
Typhus	1	0	0·0
Para-Typhoid	0	3	0·0
Diphtheria	1	4	3·0
Measles and German Measles	16	32	17·8
Erysipelas	1	2	0·8
Chicken Pox	7	21	5·2
Cholera (Suspected)	1	2	0·0
*Malaria	379	324	574·6
Yellow Fever	0	0	0·0
Plague	0	0	0·6
Suspected Plague	0	1	0·0
Phthisis	11	32	6·8
Tuberculosis (other forms of)	2	12	3·0
*Pneumonia and Influenza	21	38	30·0
*Dysentery	6	13	5·0
Anthrax	1	0	0·0
Totals	461	510	671·0

* Notifiable from 1st March, 1919.

The following Table gives particulars of the 333 vessels Disease on Board, with the measures adopted in each case :—

TABLE 9.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Jan. 1	**Elysia** ...	Bombay ...	Malaria ... (2 cases)	Royal Infirmary
Jan. 1	**Hesione** ...	River Plate...	Malaria ...	Royal Infirmary
Jan. 1	**Prometheus**	Java... ...	Pneumonia...	... ...
Jan. 1	**Cardiganshire**	Vancouver	Phthisis ...	... ...
Jan. 1	**Demerara** ...	Buenos Ayres	Phthisis ...	... ...
Jan. 2	**Zaria** ...	West Coast of Africa	Malaria ... (8 cases)	... ...
Jan. 3	**Ausonia** ...	New York ...	Phthisis ..	... ...
Jan. 6	**Castor** ...	Danzic ...	Diphtheria ...	Mill Lane
Jan. 7	**Cressado** ...	Constantinople	Phthisis ...	... ...
Jan. 8	**Eidfeld** ...	West Coast of Africa	Malaria ... (12 cases)	... ...
Jan. 8	**Banffshire** ...	Brisbane ...	Para-Typhoid	... ...

reported on their arrival as having, or having had, Infectious

REMARKS.
The patients were members of the native crew.
The patient was one of the crew.
One of the crew, a Seaman, had suffered on the voyage.
The patient, one of the crew, was landed at Colon.
The patient was a third-class passenger, who was landed at Lisbon.
All members of the crew who had suffered during the voyage.
The patient, an Engineer, died, and was buried at sea.
The patient, one of the crew, a Steward, was removed to hospital and the bedding and vessel were disinfected.
The patient was left in hospital at Gibraltar.
All the patients were members of the crew, who had suffered during the voyage.
This patient was landed at Colombo, and the usual disinfection was carried out.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Jan. 8	**Nasmyth** ...	Rosario ...	Malaria ..	Royal Infirmary
Jan. 8	**Cedric** ...	New York ...	Pneumonia .. (2 cases)	... ...
Jan. 8	**Adda** ...	West Coast of Africa	Malaria ...	... ...
Jan. 8	**Mahanada** ...	Calcutta ..	Pneumonia...	... ...
Jan. 10	**Doric Star** ...	Saigon ...	Malaria ... (14 cases)	Royal Infirmary
Jan. 10	**Hesione** ...	River Plate .	Malaria ...	Royal Infirmary
Jan. 12	**City of Nagpur**	Calcutta ...	Chicken-pox (2 cases)	Port Sanitary...
Jan. 14	**Morocco**	Alexandria ...	Pneumonia...	... ...
Jan. 16	**Berwickshire**	Australia ...	Phthisis ...	. ...
Jan. 17	**Thessaly** ...	Rosario ...	Pneumonia ...	... ...
Jan. 17	**Fantee** ...	West Coast of Africa	Malaria ...	... .
Jan. 17	**City of London**	Glasgow ...	Phthisis ..	... ...

REMARKS.

The patient was one of the crew, who was transferred from the Northern Hospital to the Royal Infirmary.

The sickness occurred on the outward passage.

One case occurred during the voyage.

The patient was a Native Seaman, who was left in hospital at Glasgow.

Fourteen of the crew suffered during the voyage. Ten had recovered on arrival in this port, and the remaining four were removed to the Royal Infirmary.

The patient was removed from his home in the City.

Two of the Native crew, having symptoms suspicious of Smallpox, were removed to the Port Hospital, and disinfection and certain vaccination carried out. The sickness proved to be Chickenpox.

The patient died and was buried at Alexandria.

This patient, a Lascar, was transferred to the s.s "Clan Ogilvy," and sailed for India.

This patient was left in hospital at Monte Video.

The patient, one of crew, was landed at Seccondee.

Reported from Glasgow that one of the crew was suffering from Phthisis.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Jan. 18	**Linmere** ...	West Coast of Africa	Dysentery ...	Royal Southern
Jan. 19	**Holbein** ...	Buenos Ayres	Tuberculosis	... ...
Jan. 20	**Meteba** ...	West Coast of Africa	Malaria ... (3 cases)	... ...
Jan. 22	**Olympia** ...	Bombay ...	Broncho-Pneumonia	... ...
Jan. 22	**Kasama** ...	New York ...	Dysentery ...	... ...
Jan. 23	**Albania** ...	New York ...	Pneumonia ...	... ...
Jan. 23	**Andania** ...	Halifax ...	Pneumonia ...	Brownlow Hill Infirmary
Jan. 23	**Andania** ...	Halifax ...	Diphtheria ...	Mill Lane
Jan. 25	**City of Nagpur**	Calcutta ...	Chicken-pox (3 cases)	Port Sanitary
Jan. 26	**City of Nagpur**	Calcutta ...	Chicken-pox (4 cases)	Port Sanitary
Jan. 26	**Bata** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
Jan. 29	**Baltic** ...	New York ...	Tuberculosis (2 cases)	Highfield Sanatorium

REMARKS.

This patient was reported from and died in the Royal Southern Hospital.

The patient, a passenger, died on the homeward passage and was buried sea.

All the patients were members of the crew, who had suffered during the voyage.

The patient was landed at Marseilles on the home passage.

The patient, a native fireman, was removed to hospital at London.

The patient was a passenger who had suffered during the voyage.

This patient, one of the seamen, was removed to hospital in Liverpool.

A stewardess was removed to hospital.

The patients were three of the native crew.

Four of the native crew were removed to hospital, and the bedding and vessel were disinfected.

Two of the crew had suffered during the voyage.

One patient, a seaman, was removed to the sanatorium; the other patient proceeded to his home in Glasgow.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Jan. 30	**Woodville** ...	West Coast of Africa	Malaria ... (2 cases)	Royal Infirmary
Feb. 2	**Massilia** ...	West Coast of Africa	Malaria .. (3 cases)	Brownlow Hill Infirmary
Feb. 2	**Salaga** ...	West Coast of Africa	Malaria ... (9 cases)	... ...
Feb. 3	**Montclare** ...	St. John's ...	Measles	Grafton Street
Feb. 3	**Montclare** ...	St. John's ...	Typhoid Fever?	Fazakerley ...
Feb. 3	**Montclare** ..	St. John's ...	Pneumonia...	Northern ...
Feb. 3	**Montclare** ...	St. John's ...	Phthisis	... ...
Feb. 3	**Lombardia** ...	West Coast of Africa	Malaria ...	Brownlow Hill Infirmary
Feb. 3	**Hazel Branch**	Valparaiso ...	Chicken-pox	.. ..
Feb. 5	**Clan Colquhoun**	Calcutta via Glasgow	Enteric Fever	... .
Feb. 7	**Portgwarra**...	La Plata ...	Consumption	... .
Feb. 7	**Appam** ...	West Coast of Africa	Malaria ... (5 cases)	... .

REMARKS
The patients were members of the crew. One had suffered during the voyage; the other was removed to the Tropical Ward of the Infirmary.
The three patients, members of the crew, were removed to hospital, and four others had recovered on arrival.
The patients were members of the crew who had suffered during the home passage.
The patient was a deck boy and was removed to hospital.
The patient was removed to the City Hospital, Fazakerley.
This patient was one of the crew, a cook, and on removal to hospital the bedding and vessel were disinfected.
The patient was a trimmer and proceeded to his home in Liverpool.
The patient, one of the crew, a fireman, was removed to hospital.
This patient had suffered whilst aboard and had recovered on arrival in this Port.
The patient was removed to hospital at Glasgow.
This patient was left at St. Vincent.
Five of the crew of this vessel had suffered from Malaria during the voyage. They had recovered on arrival in this Port.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Feb. 8	**Catalonia**	West Coast of Africa	Malaria ... (9 cases)	... ...
Feb. 13	**Deseado** ..	Buenos Ayres	Tuberculosis	Highfield Sanatorium
Feb. 15	**Frankenfels**	Basra ...	Pneumonia...	... .
Feb. 15	**Frankenfels**	Basra ...	Tuberculosis (2 cases)	... ...
Feb. 16	**Portfield** ...	Bahia ...	Malaria ...	... ...
Feb. 16	**Oropesa** ...	Peru ...	Tuberculosis	... ...
Feb. 19	**Hogarth** ...	Buenos Ayres	Phthisis ...	... ...
Feb. 19	**Flaxmere** ...	West Coast of Africa	Malaria ...	... ...
Feb. 19	**Baltic** ...	New York ...	Encephalitis Lethargica	Brownlow Hill Infirmary
Feb. 21	**Joazeiro** ...	Bahia ...	Tuberculosis	... ...
Feb. 21	**Bodnant** ...	West Coast of Africa	Malaria ... (4 cases)	... ...
Feb. 22	**Arracan** ...	Rangoon ...	Pneumonia...	... .

REMARKS
All patients were members of the crew who had suffered during the voyage.
This patient, a distressed British seaman, was removed to Highfield Sanatorium.
One of the native crew suffered during the voyage.
Two native seamen, suffering from Tuberculosis, were left at Basra.
The patient, the fourth engineer, was landed at Bahia Blanca.
A third class passenger suffered from Tuberculosis on the outward passage.
The patient, a third class passenger, died and was buried at sea.
One of the crew had suffered during the voyage.
The patient was removed to hospital and the bedding and vessel were disinfected.
This patient was the ship's carpenter who died and was buried at sea.
All patients were members of the crew who had suffered during the voyage.
The patient, a native seaman, was removed to hospital at Glasgow.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Feb. 26	**Bandon** ...	Dublin	Phthisis ...	Brownlow Hill Infirmary
Feb. 26	**Linmere** ...	West Coast of Africa	Malaria .. (2 cases)	... ...
Feb. 27	**Scientist** ...	Mexico ...	Pneumonia... (2 cases)	Royal Southern
Feb. 27	**Daytonian** ...	Portland ..	Meningitis . .	... ...
Mar. 1	**Castalia** ...	Bombay via Glasgow	Cerebro Spinal Meningitis	... ...
Mar. 2	**Flaminian** ...	Alexandria ...	Small-pox ...	... ...
Mar. 2	**Anselma-de-Larrinaga** .	Buenos Ayres	Malaria ...	Royal Infirmary
Mar. 3	**Bolana** ...	West Coast of Africa	Malaria ... (8 cases)	... ...
Mar. 5	**Celtic** ..	New York ..	Pneumonia ..	... ...
Mar. 5	**Murillo** ...	River Plate. .	Malaria ...	Royal Infirmary
Mar. 6	**Adda** ...	West Coast of Africa	Phthisis ...	... .
Mar. 6	**Egba**	West Coast of Africa	Malaria ...	... ...

REMARKS.
The patient, a steward, was removed to hospital and the usual disinfection was carried out.
Two of the crew had suffered during the voyage.
One of the patients, a storekeeper, was admitted into hospital; the other, a fireman, was left at Kingston, Jamaica.
The patient, a donkeyman, died in hospital at Boston. The vessel was disinfected by the crew.
The patient, a native seaman, was removed to hospital in Glasgow. The vessel sailed for Manchester.
The patient, a seaman, was landed at Constantinople, where the vessel was quarantined. Vaccination of the crew and disinfection of the vessel was carried out at Constantinople.
The patient, the second officer, was removed to hospital.
The patients were members of the crew, who had suffered during the voyage.
The patient, a 2nd class passenger, was removed to a private nursing home in the City.
The patient was removed to hospital and the usual disinfection was carried out.
A passenger, who proceeded to his home in Manchester.
The wireless operator had suffered during the voyage.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
Mar. 7	**Ausonia** ...	Boston ...	Malaria ...	... ...
Mar. 10	**Orita** ...	Peru &c. ...	Malaria ...	... ...
Mar. 11	**Regina** ...	New York ...	Phthisis ...	... ...
Mar. 12	**Regina** ...	New York ...	Pneumonia... (4 cases)	Fazakerley ...
Mar. 12	**Massilia** ...	Bombay ...	Malaria ... (8 cases)	... ...
Mar. 13	**Egori**... ...	West Coast of Africa	Malaria ... (5 cases)	... ...
Mar. 15	**Sydhavet** ...	Karachi ...	Malaria ...	Borough Hospital, Birkenhead
Mar. 17	**Maidan** ...	Calcutta ...	Chicken-pox	... ...
Mar. 20	**Aba**	West Coast of Africa	Phthisis ...	... ...
Mar. 20	**Chindwara** ...	Colombo ...	Tuberculosis (1 case) Malaria ... (1 case)	... ...
Mar. 21	**Lombardy** ...	Rosario ...	Dysentery ...	... ...
Mar. 23	**Elysia** ...	Bombay ...	Chicken-pox	Port Sanitary...

REMARKS
The patient, the assistant purser, had suffered during the voyage.
The patient, a greaser, was landed at Bilbao.
The patient was a naval seaman, and he proceeded to the Devonport Depôt.
Four of the crew removed to the City Hospital, Fazakerley.
All the patients were members of the crew who had suffered during the voyage.
Five of the crew suffered during the voyage.
The patient, the cook boy of the vessel, was removed to hospital.
A native fireman had suffered during the voyage, and disinfection was carried out at Colombo.
The patient, a passenger, was removed to a nursing home in the City.
The two patients were landed at Colombo.
The patient was taken into hospital at Buenos Ayres.
The patient was a child passenger, and was removed to the Port Hospital, New Ferry.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Mar. 26	**Stanley Hall**	Rangoon ...	Malaria ..	... .
Mar. 26	**Caronia** ...	New York ..	Tuberculosis	... ...
Mar. 27	**Dromore** ..	Black Sea ...	Phthisis ...	... ...
Mar. 28	**Andania** ...	Boston ...	Phthisis ...	Stanley ...
Mar. 28	**Chirripo** ...	Tela... ...	Encephalitis Lethargica	Mill Lane ...
Mar. 28	**Explorer** ...	New Orleans	Malaria ...	... ...
Mar. 30	**Warwickshire**	Rangoon ...	Measles ... (3 cases)	... ...
Mar. 31	**Bolten Hagen**	West Coast of Africa	Malaria ...	Royal Infirmary
Mar. 31	**Ortega** ...	Valparaiso ...	Phthisis ...	... .
Mar. 31	**Montclare** ...	St. John's ...	Diphtheria ... (3 cases)	Fazakerley ...
Mar. 31	**Montclare** ...	St. John's ...	Phthisis ...	... ...
April 2	**Ajax**	Java ...	Malaria .. (2 cases)	... ...

REMARKS.
The patient was the third engineer, who died from the sickness and was buried at sea.
The patient was a waiter, who proceeded to him home in the city.
The patient was a greaser, who was landed at Manchester, and the vessel was disinfected by the authorities at that Port.
The patient, a passenger, was removed to hospital.
The patient was a seaman, who was removed to hospital from his home in the city, and the usual disinfection was carried out.
The patient, one of the native crew, died and was buried at sea.
Three passengers, children, were landed at London, and the bedding and vessel were disinfected.
The patient, one of the crew, was removed to hospital.
The patient, an A.B., proceeded to his home in Rochdale.
These patients were a cabin passenger and two children, who were removed to hospital.
This patient was a third-class passenger, who proceeded to his home in Swansea.
Two of the crew had suffered during the voyage.

Date, 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
April 2	**Ebani** ...	West Coast of Africa	Malaria ...	... ...
April 2	**Mahronda** ...	Calcutta ...	Tuberculosis	... ...
April 3	**Sundsborg** ...	Oran... ...	Consumption	Parkhill ...
April 3	**Transvaal** ...	Valparaiso ...	Enteric Fever	... ...
April 6	**Appam** ...	West Coast of Africa	Phthisis ...	... ...
April 9	**Spectator** ...	Durban ...	Malaria ... (4 cases)	... ...
April 9	**Marburn** ...	St. John ...	Phthisis ...	... ...
April 10	**City of Karachi**	Bombay ...	Small-pox ...	... ...
April 10	**Boma** ...	West Coast of Africa	Malaria ... (8 cases)	... ...
April 11	**Ems**	Hamburg ...	Pneumonia...	Walton Institution
April 12	**Regina** ...	New York ...	Measles ... (2 cases)	Fazakerley ...
April 12	**Regina** ...	New York ...	Phthisis ...	... ...

REMARKS.
One of the crew was ill during the voyage.
The patient was one of the crew who was left in hospital at Glasgow.
The patient, a fireman, was removed to the Sanatorium, and the bedding and vessel were disinfected.
The patient, a seaman, was landed at Christobel.
The patient a Naval telegraphist, was landed at Plymouth.
Four of the crew were left in hospital at Durban.
A Deport proceeded to his home in Glasgow.
The patient, the 3rd Marconi operator, was left at Bombay. All the crew were vaccinated and the vessel disinfected at that Port.
All were members of the crew, who had suffered during the voyage.
An able seaman, who was removed to hospital.
The patients, two children, were removed to the City Hospital, Fazakerley.
One of the crew who proceeded to his home in Hull.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
April 14	**Montcalm** ...	St. John ...	Scarlet Fever	Fazakerley ...
April 14	**Peleus** ...	Yokohama ...	Influenzal Pneumonia...	Fazakerley ..
April 14	**Marstensen**...	Bathurst ...	Malaria ..	Royal Infirmary
April 16	**Cedric** ...	New York ...	Dysentery ...	Royal Infirmary
April 16	**Highland Star**	Buenos Ayres	Malaria ...	... ...
April 19	**Oriana** ...	Valparaiso ...	Phthisis ...	... ...
April 19	**Oriana** ...	Valparaiso ...	Diphtheria .	... ...
April 19	**Nevisian** ...	Philadelphia	Pneumonia...	... ...
April 19	**Holmia** ...	West Coast of Africa	Malaria ...	... ...
April 20	**City of Nagpur**	Karachi ...	Measles ...	Fazakerley ... (4 patients)
April 20	**City of Nagpur**	Karachi ...	Malaria ...	... ...
April 25	**Gothic Star**...	San Francisco	Phthisis .	... ...

REMARKS
The patient, a child cabin passenger, was removed to hospital and the bedding and vessel disinfected.
The patient, one of the crew, the ship's carpenter, was removed to hospital.
The patient was a fireman on board this vessel.
The patient was removed to the Royal Infirmary, Tropical Ward, and the usual disinfection was carried out on the vessel.
One of the crew had suffered during the voyage.
The patient was one of the crew, who proceeded to his home in the City.
The patient, a saloon passenger, was landed at Valparaiso, and the usual disinfection was carried out.
The patient was the fourth engineer, who died and was buried at sea.
One of the crew, a greaser, had suffered during the voyage.
Four patients were removed to the City Hospital. One of the other patients had recovered on arrival at this Port.
The patient was left in hospital at Port Said.
The patient proceeded to his home in London.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
April 26	**Oak Branch**...	South America via Panama Canal	Small-pox ... (2 cases)	Port Sanitary...
April 28	**City of Nagpur**	Karachi ..	Erysipelas ...	Fazakerley ..
April 30	**Carmania** ...	New York ...	Chicken-pox	Fazakerley ..
May 2	**Manipur** ...	Rangoon ...	Pneumonia...	... .
May 3	**Tydeus**	Java... ...	Consumption	... .
May 3	**Royal Sceptre**	Piraeus ...	Malaria ...	... .
May 3	**Antenor** ...	Hamburg ...	Malaria ...	... .
May 5	**Akabo** ...	West Coast of Africa	Malaria ... (5 cases)	... .

REMARKS.

On arrival at this Port the vessel was boarded by the Assistant Medical Officer of Health. The Captain reported one case of Smallpox, and this diagnosis was confirmed. Upon inquiry, the Medical Officer ascertained that two cases of Smallpox had been landed from the ship at Colon, where all the crew were vaccinated. Whilst inspecting the crew, a fireman was discovered who had also had an eruption which was not recognised as Smallpox—the man having continued to work throughout his illness. On examination this man proved to be convalescing from Smallpox. Both patients were removed to the Port Hospital, together with the Galley Boy, who had been in contact with the patients and who complained of feeling ill on arrival, but he did not develop the disease. Of the crew of 43, 37 whose vaccination at Colon had not been successful, were re-vaccinated. The names and addresses of all on board were obtained and forwarded to the Medical Officers of Health concerned. All the necessary disinfection was carried out by the Port Sanitary Staff.

A native saloon boy, who was removed to the City Hospital.

The patient was the chief officer, and after his removal the usual disinfection was carried out.

The patient, a native seaman, was landed at Bremerhaven.

A Pilgrim, who died on the outward passage.

One of the crew, who suffered during the voyage.

One of the crew, who suffered during the voyage.

All the patients were members of the crew, who had suffered during the voyage.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed
May 6	**M. J. Hedley**	Dublin ...	Smallpox ...	Port Sanitary...
May 7	**Salaga** ...	West Coast of Africa	Malaria ... (10 cases)	... ...
May 7	**Craftsman** ...	Rangoon via Rotterdam	Small-pox ...	Port Sanitary....
May 7	**Nowshera** ...	Manchester...	Chicken-pox (2 cases)	... ...
May 7	**Nowshera** ...	Manchester..	Malaria ...	... ...
May 8	**Orcoma** ...	South America	Phthisis ...	... ...
May 8	**Baltic** ...	New York ...	Phthisis ...	... ...
May 9	**Talthybius** ...	China ...	Pneumonia ... (2 cases)	... ...

REMARKS
This vessel, a small coasting steamer, arrived off Garston on the 6th May. One of the crew went to a Medical Practitioner at Garston, who reported the case to the Medical Officer of Health as suspected Smallpox. The diagnosis was confirmed by one of the Assistant Medical Officers of Health, and the patient was removed to the Port Hospital. The vessel was visited in the river. Five of the crew of nine were re-vaccinated—four refusing. All names and addresses were obtained and the necessary disinfection carried out. The vessel sailed for Cork on the 8th May, and the Medical Officer of Health for Cork was advised that a case of Smallpox had occurred on board. The disease was probably contracted at Gloucester, where the patient visited on the 19th April, and where he had been in contact with his sister who was suffering from supposed Chickenpox.
Ten of the crew had suffered during the voyage.
The chief steward had suffered from Smallpox during the voyage and gave rise to three secondary cases, which were removed to hospital at Rotterdam, where all the crew were vaccinated. On arrival at Liverpool the crew were inspected, and the chief steward, who had not been removed to hospital at Rotterdam, was taken to the Port Hospital, because, though convalescent, the eruption was still present on the soles of the feet. Re-vaccination was offered to all cases where the Rotterdam vaccination had been unsuccessful. The rooms occupied by patients, and their personal effects, and the bedding of the chief steward were disinfected.
The patients, two firemen, were convalescent on arrival.
One of the crew, who had recovered on arrival in this Port.
A Portuguese passenger, who died and was buried at sea.
The patient was a wireless operator, who proceeded to his home in Wallasey.
The patients were two pilgrims, who died on the outward passage.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
May 9	**Talthybius** ...	China ...	German Measles	... ...
May 10	**Haverford** ...	Philadelphia	Phthisis ...	... ...
May 12	**Hogarth** ...	Buenos Ayres	Phthisis ...	... ...
May 13	**Cedric** ...	New York ...	Phthisis ...	... ...
May 13	**Caronia** ...	New York ...	Phthisis .. (2 cases)	... ...
May 16	**Montcalm** ...	St. John's	Phthisis ..	... .
May 16	**City of Baroda**	Karachi ...	Malaria ... (6 cases)	... .
May 18	**Baltic** ...	New York ...	Enteric Fever	... .
May 20	**Demerara** ...	Buenos Ayres	Phthisis ...	... ...
May 20	**Montrose** ...	Montreal ...	Chicken-pox	Fazakerley .
May 20	**Montrose** ...	Montreal ...	Pneumonia ...	... .
May 20	**Regina** ...	Montreal ...	Phthisis ...	... .

REMARKS.
A midshipman, who suffered during the voyage.
The patient, a passenger, proceeded to his home in Elswick.
The patient died and was buried at sea.
The patient was landed at Queenstown and the usual disinfection was carried out.
Both of these patients (Deportees) proceeded to their homes in Ireland.
The patient, a domestic servant, proceeded to her home in Surrey.
The patients were members of the crew, who had suffered during the voyage.
The patient, a saloon passenger, was removed from the Exchange Hotel to a Nursing Home in the city.
The patient, a fireman, proceeded to his home in Cardiff.
The patient, a child, was removed to the City Hospital, and the usual disinfection was carried out.
The patient was a child passenger, who had suffered during the voyage.
The patient, a passenger, died and was buried at sea.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
May 22	**Laconia** ...	Boston ...	Scarlet Fever	Fazakerley ...
May 25	**Oropesa** ...	Valparaiso ...	Pneumonia...	Royal Infirmary
May 26	**Clan Chisholm**	Delagoa Bay	Erysipelas ...	Fazakerley ...
May 26	**Castalia** ...	Bombay ...	Malaria .. (6 cases)	... ...
May 28	**Celtic** ...	New York ...	Phthisis ... (2 cases)	... ...
May 29	**Bathurst** ...	West Coast of Africa	Malaria ... (5 cases)	... ...
May 29	**Arracan** ...	Rangoon ...	Pneumonia...	... ...
May 30	**Chindwin** ...	Rangoon via Hamburg	Chicken-pox (4 cases)	.. ..
June 1	**Linmere** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
June 1	**Priam** ...	Yokohoma ...	Malaria ...	.. ..
June 3	**Montclare** ...	Montreal ...	Measles ...	Fazakerley ...
June 3	**Montclare** ...	Montreal ...	Chicken-pox	... ...

REMARKS.
The patient, a passenger, was removed to the City Hospital, Fazakerley, and the bedding and vessel were disinfected.
The patient, a passenger, was removed to the Royal Infirmary.
The patient, a fireman on this vessel, was removed to the City Hospital, Fazakerley.
Six of the crew had Malaria during the voyage.
Both patients proceeded to their homes.
All patients were members of the crew, who had suffered during the voyage.
A Lascar, who was landed at Port Said.
Four Lascars, each landed at Aden, Hamburg, Leith and Glasgow. All the native crew were vaccinated at Hamburg, and disinfection was carried out at that Port.
Two of the crew, who suffered during the voyage.
A Pilgrim, who died and was buried at sea.
The patient, a child passenger, was removed to hospital, and the usual disinfection was carried out.
A cabin passenger, who was landed at Montreal.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
June 3	**Scythia** ...	New York ...	Phthisis ...	... ...
June 3	**Scythia** ...	New York ...	Chicken-pox	Fazakerley ...
June 3	**Scythia** ...	New York ...	Measles ... (3 cases)	... ...
June 4	**Miami** ...	Santa Marta	Pneumonia ... (2 cases)	... ...
June 5	**Elmina** ...	West Coast of Africa	Malaria ... (4 cases)	... ...
June 6	**Dakotian** ..	Tampico ...	Malaria ...	Royal Infirmary
June 7	**Agapenor** ...	Singapore ...	Pneumonia...	... ...
June 7	**Clan Munroe**	Australia ...	Pneumonia ...	... ...
June 8	**Conway** ... School Ship	River Mersey	Diphtheria ...	Conway House, Rock Ferry
June 9	**City of Durham**	Madras ...	Pneumonia... Tuberculosis	David Lewis Northern
June 9	**Caronia** ...	New York ...	Phthisis ...	... ...
June 9	**Caronia** ...	New York ...	Measles ...	Fazakerley ...

REMARKS

A distressed British seaman proceeded to an address in Liverpool.

The patient, a child, aged three years, was removed to the City Hospital, Fazakerley.

Three children, who were landed at Halifax on the outward passage.

Two of the crew, firemen, were landed at Foyal Azores.

Four of the crew suffered during the voyage.

The patient, a trimmer on this vessel, was removed to hospital.

A female Pilgrim died during the voyage.

The patient was the chief officer, who was left in Australia.

The patient was a Cadet. The bedding was removed by the Port Sanitary launch "Snowflake" for disinfection, and the vessel was disinfected by the crew.

Both patients were removed to hospital and the usual disinfection was carried out.

Passenger proceeded home.

This passenger patient was removed to hospital.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
June 9	**Cedric** ...	New York ...	Phthisis ... (2 cases)	... ...
June 11	**Cedric** ...	New York ...	Measles ...	Grafton Street
June 12	**City of Exeter**	Calcutta ...	Pneumonia...	Tranmere Infirmary
June 12	**City of Exeter**	Calcutta ...	Small-pox ...	... ...
June 12	**City of Exeter**	Calcutta ...	Cerebro Spinal Meningitis	... ...
June 12	**City of Exeter**	Calcutta ...	Diphtheria ...	... ...
June 12	**City of Exeter**	Calcutta ...	Pneumonia...	... ...
June 13	**Finland** ...	Hamburg ...	Erysipelas ...	Fazakerley ...
June 13	**Eboe**	West Coast of Africa	Malaria ... (2 cases)	... ...
June 15	**Scindia** ...	Bombay ...	Pneumonia...	... ...
June 15	**Benin**	West Coast of Africa	Malaria ... (2 cases)	... ...
June 16	**Samaria** ...	Boston	Phthisis ...	... ...

REMARKS.
Both passengers proceeded to their homes.
A third-class passenger removed to hospital.
Patient was removed to hospital.
A Fireman was landed at Colombo, where disinfection of vessel took place and passengers and crew were re-vaccinated.
A native trimmer was removed to hospital at Glasgow.
A native cook was removed to hospital at Glasgow.
A native, who was removed to hospital at Glasgow.
The patient, a seaman, was removed to hospital.
Two of the crew suffered on the voyage.
A native fireman, who was landed at Marseilles.
Two of the crew suffered during the voyage.
The patient was a steward, who proceeded to his home.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
June 16	**Regina** ...	New York ...	Chicken-pox	Sparrow Hall
June 16	**Regina** ...	New York ...	Phthisis ...	... .
June 16	**Montrose** ...	Montreal ...	Measles ...	... ...
June 16	**Montrose** ...	Montreal ...	Phthisis ...	... ...
June 17	**Prometheus**	Batavia ...	Pneumonia	... ...
June 18	**Arakaka** ...	Demerara ...	Enteric Fever	Royal Infirmary
June 21	**Cooee** ...	New York ...	Enteric Fever (2 cases)	... ...
June 23	**Conway** ... Training Ship	Lying in the River Mersey	Diphtheria ...	Conway House.
June 27	**Ortega** ...	West Coast of South America	Phthisis ... (2 cases)	.. ..
June 29	**Hildebrand** ...	Ceara ...	Tuberculosis	... .
June 29	**Hildebrand** ...	Ceara ...	Malaria ...	... ...
July 3	**Doric**... ...	Montreal ...	Paratyphoid	Fazakerley ...

REMARKS.

The patient was removed to the City Hospital, Sparrow Hall.

The patient was deported to Copenhagen.

The patient had recovered and was allowed to proceed.

The patient was a steward, who proceeded to his home.

A male Pilgrim, who died during the voyage.

A passenger was removed to hospital and the bedding and vessel were disinfected.

The third officer was landed at Aden and the disinfection was carried out by the crew. A fireman was landed at London and the disinfection was carried out by the P.S.A., London.

A Cadet, who was removed to Conway House, Rock Ferry.

Two passengers proceeded to their homes.

A Portuguese passenger died at Para. The disinfection was carried out by the ship's surgeon.

A passenger was landed at Lisbon.

The patient was removed to hospital, and the usual disinfection was carried out.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
July 3	**Doric**... ...	Montreal ...	Phthisis ...	... ...
July 3	**Zaria** ...	West Coast of Africa	Malaria ... (6 cases)	... ...
July 4	**Annabel Mendi**	Spain ...	Enteric Fever	Brownlow Hill Infirmary
July 4	**Tresithney** ...	Australia ...	Phthisis ...	... ...
July 4	**Deseado** ...	River Plate...	Phthisis ...	... ...
July 6	**Holbein** ...	Bahia ...	Measles ...	... ...
July 7	**Montcalm** ...	Montreal ...	German Measles (2 cases)	Fazakerley ...
July 7	**Montcalm** ...	Montreal ...	Phthisis ...	... ...
July 7	**Spectator** ...	New Orleans	Dysentery ...	... ...
July 8	**Canada** ..	Montreal ...	Phthisis ...	... .
July 8	**Elder Branch**	West Coast of South America	Beri-Beri ...	Royal Infirmary Tropical Ward
July 10	**Aba**	West Coast of Africa	Malaria ...	... ...

REMARKS.
The patient proceeded home to Ireland.
Six of the crew suffered during the voyage.
Patient was admitted to hospital as Pneumonia and found to be suffering from Enteric Fever.
A fireman, who proceeded to his home in Barry.
The patient proceeded to Russia.
The sickness occurred during the voyage, and the disinfection was carried out by the crew.
Two passengers were removed to the City Hospital, Fazakerley.
A passenger proceeded to her home in Stockport.
The patient was sent to hospital at New Orleans.
The patient, a deportee, proceeded to Norway.
The patient was removed to hospital.
The patient, a stewardess, suffered on the passage, but was well on her arrival at this Port.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
July 12	**Vega**	West Coast of Africa	Malaria ... (2 cases)	Brownlow Hill Infirmary
July 14	**Montrose** ...	Montreal ...	Phthisis ...	... ...
July 16	**Desna** ...	Buenos Ayres	Phthisis ...	... ...
July 16	**Desna** ...	Buenos Ayres	Measles ... (3 cases)	... ...
July 16	**Montrose** ...	Montreal ...	Phthisis ...	... ...
July 16	**Franconia** ...	New York ...	Measles ...	... ...
July 16	**Franconia** ...	New York ...	Pneumonia	... ...
July 17	**Boma** ...	West Coast of Africa	Malaria and Pneumonia	... ...
July 17	**Boma** ...	West Coast of Africa	Malaria ... (12 cases)	... ...
July 19	**City of Dunedin**	Karachi ...	Pneumonia	Brownlow Hill Infirmary
July 19	**Waipara** ...	Australia ...	Tuberculosis	... ...
July 23	**Megantic** ...	Montreal ...	Chicken-pox	Fazakerley ...

REMARKS.

An ordinary seaman and a deck boy suffered on the voyage, the latter was removed to hospital and the former had recovered.

The patient proceeded to his home.

A first class passenger, proceeded to London.

Three third class passengers, suffered on the outward voyage.

The patient, a deportee, proceeded to his home.

A second class passenger suffered on the voyage.

A steward was ill on the voyage.

An apprentice died on the voyage.

Twelve of the crew suffered during the voyage.

A native was removed to hospital and the necessary disinfection was carried out.

The third engineer was landed at Cairns, and the disinfection was done by the crew.

A pantryman was removed to the City Hospital, Fazakerley, and a third class passenger was landed at Grosse Isle.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
July 25	**Ebani** ...	West Coast of Africa	Malaria ... (18 cases)	... ...
July 25	**Appam** ...	West Coast of Africa	Malaria ...	... ...
July 25	**Egba**... ...	West Coast of Africa	Malaria ... (14 cases)	... ...
July 26	**Celtic** ...	New York ..	Measles ... (2 cases)	... ...
July 26	**Arabistan** ...	Basra ...	Dysentery ... (2 cases)	... ...
July 27	**Princessa** ...	River Plate...	Pneumonia	... ...
July 28	**Onitsha** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
July 30	**Zinovia** ...	Rosario ...	Enteric Fever	Royal Infirmary
July 30	**Baltic** ...	New York ...	Phthisis ...	Brownlow Hill Infirmary
July 31	**Demerara** ...	Buenos Ayres	Dysentery ..	... ...
July 31	**Clan Malcolm**	India ...	Pneumonia	... ...
July 31	**Ediba** ...	West Coast of Africa	Malaria ... (3 cases)	... ...

REMARKS.

Eighteen of the crew suffered during the voyage.

A first class passenger was ill on the voyage.

Fourteen of the crew suffered during the voyage.

Two third class passengers were ill on the outward voyage and the usual disinfection was done at New York.

The second officer and a fireman were ill on the voyage. Both had recovered on arrival at this Port.

A seaman died on the voyage.

A steward and a Cadet suffered on the voyage; both were well on arrival.

A seaman was removed to hospital with Dysentery. The case proved to be Enteric Fever.

The patient, a Lascar, was removed to hospital.

The Captain died as the vessel entered the River Mersey. The body was landed and the ship disinfected.

A native seaman, who was sent to hospital at Glasgow.

Three of the crew, who had suffered on the voyage, were well on arrival at this Port.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Aug. 2	**Mayumbe** ...	West Coast of Africa	Malaria ... (8 cases)	... ...
Aug. 4	**Montcalm** ...	Montreal ...	Phthisis ...	... ...
Aug. 4	**Aeneas** ...	Australia ...	Measles ...	... ...
Aug. 7	**Cedric** ...	New York ...	Measles ...	Grafton Street
Aug. 7	**Cedric** ...	New York ...	Phthisis ...	... ...
Aug. 7	**Caronia** ...	New York ...	Small-pox ?... (2 cases)	... ...
Aug. 7	**Caronia** ...	New York ...	Chicken-pox	... ...
Aug. 9	**Pavia** ...	Black Sea ...	Cholera ? ...	... ...
Aug. 9	**Bompata** ...	West Coast of Africa	Malaria ... (3 cases)	... ...
Aug. 10	**Montrose** ...	Montreal ...	Phthisis ...	... ...
Aug. 10	**Winnebago** ...	Philadelphia	Phthisis ...	... .
Aug. 10	**Bata**	West Coast of Africa	Malaria ... (2 cases)	... .

REMARKS.
Eight members of the crew had suffered during the voyage.
A passenger, who proceeded to Haarlem, Holland
A first class passenger suffered during the voyage.
A second class passenger was removed to hospital and the usual disinfection was carried out.
The patient was a trimmer, who proceeded to his home.
Two third class passengers were landed at Halifax on the outward voyage, where vaccination and disinfection were carried out.
A third class passenger suffered on the outward voyage.
The Captain was admitted to hospital at Constantinople, with violent pains and diarrhœa. The vessel was quarantined for two days and disinfected throughout. The Captain rejoined the vessel, 22nd June. No other sickness was reported.
Three of the crew suffered during the voyage. All were well on arrival at this Port.
The second engineer was sent to hospital at Montreal where disinfection was also carried out.
A seaman was examined by one of the Liverpool Port Medical Officers, and the vessel proceeded to Manchester. The Port Authority at the Port of Manchester were informed.
Two of the crew suffered during the voyage.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Aug. 13	**Adriatic** ...	New York .	Phthisis ...	... ...
Aug. 13	**Franconia** ...	New York ...	Diphtheria ...	... ...
Aug. 13	**Alknaar** ...	Valparaiso ...	Enteric Fever	... ...
Aug. 14	**Oriana** ...	Peru ...	Phthisis ...	... ...
Aug. 14	**Oriana** ...	Peru ...	Pneumonia...	... ...
Aug. 14	**Biafra** ...	West Coast of Africa	Malaria .	... ...
Aug. 15	**Dalemoor** ...	Karachi ...	Malaria ...	... ...
Aug. 15	**Sacandaga** ...	Savannah ...	Pneumonia...	Royal Infirmary
Aug. 17	**Samaria** ...	Boston ...	Phthisis ...	... ...
Aug. 17	**Amarapoora**	Rangoon ...	Malaria . (2 cases)	... ...
Aug. 18	**Eurylochus** ...	Shanghai ...	Pneumonia	... ...
Aug. 18	**Theseus** ...	Japan ...	Malaria ... (2 cases)	... ...

REMARKS

A steward proceeded to his home in Liverpool.

A third class passenger was ill on the outward passage. The disinfection was carried out by the ship's surgeon.

A fireman landed at Callao and returned to the ship when convalescent. The disinfection of the vessel was carried out by the crew.

A fireman proceeded to his home in Bootle.

A passenger was landed at Santander.

A seaman was landed at Sierra Leone.

A seaman suffered during the voyage.

The second officer was removed to hospital.

A second class passenger who proceeded to her home in Ireland.

Two of the native crew were landed at Southampton.

A native fireman was sent to hospital at Singapore.

Two of the crew suffered on the voyage.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Aug. 18	**Theseus** ...	Japan ...	Erysipelas ...	... ...
Aug. 21	**Commandant Mages**	Hong-Kong...	Continued Fever	Tropical Ward Royal Infirmary
Aug. 21	**Matatua** ...	Australia ...	Phthisis ...	... .
Aug. 21	**Adda** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
Aug. 22	**Haverford** ...	Philadelphia	Chicken-pox (2 cases)	... ...
Aug. 22	**Montlaurier**...	Quebec ...	Measles ... (2 cases)	... ...
Aug. 22	**Clan Chattan**	Sourabaya ...	Malaria ...	... ...
Aug. 24	**Woodville** ...	West Coast of Africa	Malaria ... (7 cases)	... ...
Aug. 24	**Aidan** ...	Ceara ...	Malaria and Pneumonia	... ...
Aug. 25	**Myrmidon** ...	Java ...	Tuberculosis (?)	... ...
Aug. 27	**Buteshire** ...	Australia ...	Dysentery ...	Royal Infirmary
Aug. 28	**Akabo** ...	West Coast of Africa	Malaria ...	Royal Southern

REMARKS.
A wireless operator suffered on the voyage.
A seaman was removed to hospital and the usual disinfection was carried out. The sickness proved to be Dysentery.
A distressed British seaman was landed at Tilbury Docks, where disinfection was carried out.
Two of the crew suffered during the voyage.
Two children were landed at Philadelphia.
Two passengers suffered on the outward passage, and the disinfection was done by the Surgeon.
The Marconi operator died during the voyage.
Seven of the crew suffered during the voyage. All had recovered on arrival at this Port.
A Portuguese third class passenger died on the outward passage.
The patient was a Chinese pantry boy, who received medical treatment on board the vessel.
The second engineer was removed to hospital.
The second cabin steward was removed to hospital.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Aug. 30	**Batoe** ...	Java ...	Malaria ...	... ...
Aug. 30	**Salaga** ...	West Coast of Africa	Malaria ...	... ...
Aug. 30	**Salaga** ...	West Coast of Africa	Diphtheria .	Fazakerley ...
Aug. 30	**Diplomat** ...	Newport News	Pneumonia(?)	.. ..
Sept. 1	**Castalia** ...	Bombay ...	Malaria ...	... ...
Sept. 1	**Tintoretto** ...	Rosario ...	Para Typhoid (2 cases)	... ...
Sept. 3	**Cedric** ...	New York ...	Phthisis ...	... ...
Sept. 3	**Scythia** ...	Boston ...	Phthisis ...	Brownlow Hill Infirmary
Sept. 4	**Ascanius** ...	Australia ...	Acute Encephalitis	... ...
Sept. 4	**Mangalore** .	India ...	Pneumonia...	Tranmere Infirmary
Sept. 5	**Fordefjord** ...	West Coast of Africa	Malaria ... (5 cases)	... ...
Sept. 8	**Montrose** ...	Montreal ...	Phthisis ...	... .

REMARKS

A fireman suffered on the voyage.

A butcher suffered during the voyage.

A passenger was removed to hospital, and the bedding and vessel were disinfected.

A native seaman was landed at Newport. Disinfection was carried out by the crew.

A passenger suffered during the voyage.

The chief officer was landed at St. Vincent, and an A.B. at Rotterdam. Vessel was disinfected at the latter place.

The patient was a steward, who proceeded to his home.

A third class passenger was removed to hospital.

A fireman was landed and died at Sydney, where disinfection of vessel was done.

A native seaman was removed to hospital.

Five of the crew suffered on the voyage. All were well on arrival here

A passenger proceeded home.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Sept. 8	**Ningchow** ...	New York ...	Measles ...	... ...
Sept. 15	**Celtic** ...	New York ...	Phthisis ...	... ...
Sept. 17	**Baron Poleworth**	Samarang ...	Malaria ...	Royal Infirmary
Sept. 17	**Essex** ...	Australia ...	Phthisis ...	... ...
Sept. 17	**Baron Inchcape**	Java... ...	Plague (?) ...	... ...
Sept. 18	**Eboe** ...	West Coast of Africa	Malaria ...	... ...
Sept. 18	**Aguila** ...	Teneriffe ...	Tuberculosis and Asthma	.. ..
Sept. 19	**Matina** ...	Teneriffe ...	Malaria ...	... ...
Sept. 19	**Lancashire** ...	Rangoon ...	Pneumonia...	... ...
Sept. 19	**Honorius** ...	Buenos Ayres	Pneumonia...	... ...
Sept. 19	**Honorius** ...	Buenos Ayres	Scarlet Fever (?)	... ...
Sept. 22	**Haverford** ...	Philadelphia	Enteric Fever	Fazakerley ...

REMARKS.

A deck boy was landed at Singapore.

A second class passenger in transit to Greece.

A Lascar fireman was removed to hospital.

The quartermaster was landed at London.

A native fireman was landed at Algiers on the 24th August. Disinfection was carried out by the Sanitary Authority at Algiers. There was no further case, and the steamer was searched for rats at London and Liverpool.

A deck boy suffered on the voyage.

A saloon passenger died on 15th September, and the body was landed at Liverpool.

A fireman, who was paid off, was said to have Malaria.

A native fireman, who suffered on the voyage.

A fireman died and was buried at sea.

A seaman was landed at New York, where disinfection was carried out.

A passenger was removed and the bedding and vessel disinfected. Sickness proved non-infectious.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Sept. 22	**Montclare** ...	St. John ...	Measles ...	... ...
Sept. 22	**Montclare** ...	St. John ...	Scarlet Fever	... ...
Sept. 23	**Doric**... ...	Montreal ...	Phthisis ...	Fazakerley ...
Sept. 26	**Zaria** ...	West Coast of Africa	Malaria ... (8 cases)	... ...
Sept. 27	**Ortega** ...	Valparaiso ...	Malaria ... (2 cases)	... ...
Sept. 27	**Clan McFarlane**	East Indies...	Malaria ... (3 cases)	... ...
Oct. 2	**Canada** ...	New York ...	Chicken-pox (2 cases)	... ...
Oct. 2	**Inventor** ...	Calcutta (?)...	Cholera ...	... ...
Oct. 3	**Cornwall** ...	Australia ...	Pneumonia	... ...
Oct. 4	**Bodnant** ...	West Coast of Africa	Malaria ... (6 cases)	... ...
Oct. 4	**Bodnant** ...	West Coast of Africa	Malaria (?) ...	... ...
Oct. 8	**Regina** ...	Montreal ...	Phthisis ...	... ...

REMARKS.
A third class passenger was ill on the voyage.
A third class passenger was landed at Grosse Isle, and disinfection of the ship was carried out by the crew.
A seaman was removed to hospital.
Eight of the crew suffered on the voyage.
One passenger and one of the crew suffered on the voyage.
The patients were medically attended on board the vessel.
Two third class passengers were landed at Grosse Isle, and disinfection was carried out by the surgeon.
The fifth engineer was unwell for three days and under medical treatment at Port Sudan. Two or three other cases occurred. Disinfection was carried out at Port Sudan and the bedding destroyed.
A trimmer was left in hospital in Dunbar.
Six of the crew suffered during the voyage.
A deck boy was left in hospital at Sierra Leone.
The patient was a passenger, who proceeded to London.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Oct. 8	**Montrose** ...	Montreal ...	Measles ...	... ...
Oct. 8	**Nitonian** ...	Philadelphia	Pneumonia ...	... ...
Oct. 15	**Jaffa** ...	Patras ..	Dysentery ... (2 cases)	... ...
Oct. 15	**Megantic** ...	Montreal ...	Enteric Fever ?	Fazakerley ...
Oct. 16	**Oroya** ...	Peru ...	Measles ...	... ...
Oct. 22	**Montclare** ...	Montreal ...	Measles ...	... ...
Oct. 23	**Doric** ...	Montreal ...	Measles ...	... ...
Oct. 25	**Montcalm** ...	Montreal ...	Measles ...	... ...
Oct. 27	**Stephen** ...	Para ...	Chicken-pox (2 cases)	... ...
Oct. 29	**Canada** ...	Montreal ...	Tuberculosis	Northern David Lewis
Oct. 29	**Astronomer**...	Calcutta ...	Dysentery ...	Brownlow Hill
Oct. 29	**Caronia** ...	New York ...	Phthisis ...	... ...

REMARKS.

A child passenger was landed at Grosse Isle along with nine contacts. Disinfection was done by the Surgeon.

The Captain was landed and removed to hospital at Boston.

A seaman was landed at Patras and a trimmer died at sea on the 20th September.

A steward was removed to hospital, and the sickness proved to be Enteric Fever.

A child passenger was landed at Panama on the outward voyage.

A third class passenger was landed at Grosse Isle.

A child patient was landed at Grosse Isle.

A third class passenger was landed at Grosse Isle.

Two children, third class passengers, were landed at Para.

A harvester deportee was removed to hospital.

A greaser was removed to hospital.

The patient proceeded to Czecho Slovakia.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Oct. 29	**Caronia** ...	New York ...	Pneumonia	Brownlow Hill
Oct. 30	**Laurel Branch**	West Coast of S. America	Tuberculosis	Brownlow Hill
Oct. 31	**Conway** ...	River Mersey	Diphtheria ...	Conway House, Rock Ferry
Nov. 1	**Yangstze** ...	Japan ...	Dysentery ...	... ...
Nov. 2	**City of Lucknow**	India	Chicken-pox	Port Sanitary
Nov. 2	**Haverford** ...	Philadelphia	Phthisis ..	Highfield Sanatorium
Nov. 2	**Haverford** ...	Philadelphia	Chicken-pox	... .
Nov. 2	**Montrose** ...	Quebec ...	German Measles	... ...
Nov. 2	**West Cheswald**	Galveston ...	Enteric Fever (?)	Fazakerley ...
Nov. 5	**Adriatic** ...	New York ...	Phthisis. ...	... .
Nov. 5	**Adriatic** ...	New York	Pneumonia...	... .
Nov. 6	**Hildebrand** ...	Manaos ...	Phthisis ...	... .

REMARKS.
A cook was removed to hospital.
A cook was removed to hospital.
A Cadet was removed to Conway House, Rock Ferry.
The patient, a steward, was removed to hospital at Kobe and rejoined ship on his recovery.
A Lascar cook was removed to hospital.
The interpreter was removed to Sanatorium.
The patient, a passenger, recovered and was landed at Queenstown.
A cabin passenger suffered on the voyage.
A seaman was removed to hospital. The sickness proved to be not Enteric Fever.
The patient proceeded to his home in Scotland.
A passenger died on 1st November.
A third class passenger was landed at Lisbon.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Nov. 9	**Westmoreland**	New Zealand	Phthisis ...	... ...
Nov. 12	**Elysia** ...	Bombay ...	Phthisis ...	... ...
Nov. 12	**Ebani** ...	West Coast of Africa	Malaria ...	... ...
Nov. 13	**Appam** ...	West Coast of Africa	Enteric Fever (2 cases)	... ...
Nov. 13	**Massilia** ...	Bombay ...	Malaria ... (2 cases)	... ...
Nov. 13	**Montlaurier**	Quebec ...	Pneumonia ...	David Lewis Northern
Nov. 14	**Herefordshire**	Rangoon ...	Pneumonia ...	... ...
Nov. 15	**Assiout** ...	Alexandria ...	Dysentery ...	... ...
Nov. 15	**Samaria** ...	Boston ...	Chicken-pox	... ...
Nov. 16	**Montclare** ...	Montreal ...	Chicken-pox	Fazakerley ..
Nov. 17	**Lime Branch**	Valparaiso ...	Phthisis ...	... .
Nov. 19	**Lime Branch**	Valparaiso ...	Consumption	... .

REMARKS.
The second officer was removed to hospital at Auckland.
A Lascar trimmer, returning home to India.
A wireless watcher suffered during the voyage.
The fifth engineer was removed to hospital at Lagos. A butcher, who was also removed to hospital, died. The usual disinfection was carried out.
A Lascar was removed to hospital at London, also a passenger suffered on the voyage.
A third class passenger was removed to hospital.
One of the crew was removed to hospital at Colombo and rejoined ship on recovery.
The chief engineer was sent to hospital at Alexandria.
A child passenger was landed at Boston.
A child passenger was removed to hospital.
A Chinese cook died 26th October, and was buried at sea.
A Chinese A.B. was landed at Valparaiso. The ship's quarters were fumigated with SO_2.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Nov. 20	**Carmania** ...	New York ...	Measles ... (4 cases)	... ...
Nov. 20	**Carmania** ...	New York ...	Erysipelas ...	... ...
Nov. 21	**Baltic** ...	New York ...	Pneumonia	... ...
Nov. 21	**Onitsha** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
Nov. 22	**Elmina** ...	West Coast of Africa	Malaria ...	Walton Institution
Nov. 22	**Oriana** ...	Peru ...	Phthisis ..	... ...
Nov. 22	**Oriana** ...	Peru ...	Dysentery ... (2 cases)	... ...
Nov. 22	**Oriana** ...	Peru ...	Scarlet Fever	... ...
Nov. 23	**Telamon** ...	Singapore ...	Dysentery ...	... ...
Nov. 26	**Cedric** ...	New York ...	Scarlet Fever	Nertherfield Rd.
Nov. 26	**Cedric** ...	New York ...	Bron. Pneumonia	... ...
Nov. 26	**Circassia** ...	Bombay ...	Phthisis	... ...

REMARKS.

Four children passengers, third class, two were landed at Boston and two at Ellis Island.

A third class passenger was landed at Boston.

A third class passenger died and was buried at sea.

A second steward and a greaser suffered on the voyage.

A steward was removed to hospital from his home in the City.

An engineer proceeded to his home in Wales.

Two cases occurred during the voyage.

A steward was landed at Colon and the usual disinfection was carried out.

The master was left in hospital at Singapore.

A steward was removed to the City Hospital and usual disinfection was carried out.

A male deportee suffered on the voyage.

The second officer proceeded to his home in Cardiff.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Nov. 27	**Clan Macbeth**	South Africa	Continued Fever	Fazakerley ...
Nov. 27	**Abinsi** ...	West Coast of Africa	Malaria ...	... ...
Nov. 28	**Pengreep** ...	Basra ...	Malaria ...	... ...
Nov. 28	**Pengreep** ...	Basra ...	Dysentery ...	... ...
Dec. 3	**Rhexenor** ...	Hong-Kong...	Phthisis ...	... ...
Dec. 4	**Regina** ...	Montreal ...	Phthisis ...	... ...
Dec. 4	**Regina** ...	Montreal ...	Pneumonia ...	... ...
Dec. 6	**Clan McKellar**	Australia ...	Phthisis ...	... ...
Dec. 6	**Darian** ...	Philadelphia	Typhoid Fever (2 cases)	... ...
Dec. 8	**Ediba** ...	West Coast of Afria	Malaria ... (9 cases)	... ...
Dec. 8	**Adda** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
Dec. 10	**Celtic** ...	New York ..	Measles ...	Fazakerley ...

REMARKS.
The second engineer was removed to hospital, and the usual disinfection was carried out. The sickness proved to be Influenza.
The ship's barber suffered during the voyage.
The second engineer suffered during the voyage.
The cook was landed at Port Sudan.
The patient proceeded to his home in Seacombe.
The patient proceeded to his home in London.
A passenger died during the voyage.
A native fireman was removed to hospital at Aden.
A steward and also an engineer were removed to hospital at Manchester.
Nine of the crew suffered on the voyage.
Two of the crew suffered on the voyage.
A female book-keeper was removed to hospital, and the usual disinfection was carried out.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Dec. 13	**Statesman** ...	East Africa ...	Phthisis ...	Walton Institution
Dec. 13	**Ulysses** ...	Brisbane ...	Phthisis . .	... ...
Dec. 15	**Montclare** ...	St. John ...	Phthisis ...	... ...
Dec. 17	**Demerara** ...	Buenos Ayres	Phthisis ...	... ...
Dec. 18	**Gibel Gelahui**	Spain ...	Encephalitis Lethargica(?)	Fazakerley ...
Dec. 18	**Ausonia** ...	Boston ...	Tuberculosis	... ...
Dec. 18	**Ausonia** ...	Boston ...	Scarlet Fever	... ...
Dec. 18	**Zaria** ...	West Coast of Africa	Malaria (4 cases)	... ...
Dec. 21	**City of Oxford**	Alexandria ...	Pneumonia	... ...
Dec. 22	**Memnon** ...	Yokohama ...	Dysentery ...	... ...
Dec. 24	**City of Nagpur**	India ...	Diphtheria ...	Mill Lane ...
Dec. 24	**Laconia** ...	New York ...	Phthisis ...	... ...

REMARKS.
A native trimmer removed to hospital.
A seaman, who proceeded to his home in Blackpool.
A boilermaker, who proceeded to his home in Dundee.
A third class passenger died and was buried at sea.
A fireman was removed to hospital. The sickness proved to be Syphilis.
A cabin passenger was landed at Queenstown.
The bell boy was removed to hospital at Montreal, where disinfection was carried out.
Four of the crew suffered on the voyage.
An able seaman died at Alexandria.
One of the crew was treated at Shanghai and recovered.
The patient was removed to hospital, and the usual disinfection was carried out.
A third class passenger was landed at Queenstown.

Date 1923.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Dec. 24	**Laconia** .	New York ...	Pneumonia	... .
Dec. 24	**Fordefjord** ...	West Coast of Africa	Malaria (4 cases)	... .
Dec. 25	**Aba**	West Coast of Africa	Malaria ... (5 cases)	... ...
Dec. 25	**Castalia** ...	Bombay ...	TyphoidFever	Fazakerley ...
Dec. 25	**Castalia** ...	Bombay ...	Pneumonia	... ...
Dec. 28	**Oropesa** ...	Valparaiso ...	Chicken-pox (2 cases)	Fazakerley ...
Dec. 28	**Oropesa** ...	Valparaiso ...	Measles ... (2 cases)	... ...
Dec. 28	**Oropesa** ...	Valparaiso ...	Consumption	... ...
Dec. 28	**Oropesa** ...	Valparaiso ...	Diphtheria ...	... ...
Dec. 31	**Castalia** ...	Bombay ...	Phthisis ...	Brownlow Hill
Dec. 31	**Governor** ...	San Francisco	Phthisis ...	... ...
Dec. 31	**Sile** ...	River Plate Ports	Phthisis ...	Brownlow Hill

REMARKS.
The pantryman died and was buried at sea.
Four of the crew suffered during the voyage.
Five of the crew suffered during the voyage.
The carpenter was removed to hospital, and the usual disinfection was carried out.
A native seaman died and was buried at sea.
Two children passengers were removed to hospital.
Two convalescent children proceeded to their home.
The patient proceeded to his home.
A third class passenger was landed at Rio de Janeiro, where disinfection was carried out.
A seaman was removed to hospital and the bedding and vessel disinfected.
A native was landed and removed to hospital at San Francisco.
The patient was removed to hospital and the bedding and vessel disinfected.

Sanitation of Vessels.

The Port Sanitary Authority has a staff of seven Sanitary Inspectors, who visit the ships lying in the docks as soon as possible after arrival. The Inspector makes detailed enquiries as to any sickness amongst the passengers and crew during the voyage and into all circumstances affecting the health of those on board. He then inspects the sanitary condition of the ship and gives a memorandum to the Master specifying any defects found and requiring their remedy. Other duties of the Sanitary Inspectors are, the disinfection of rooms after the removal of infectious cases, the supervision of fumigations for rat destruction, when the certificate issued by the Port Sanitary Authority is required, or in any case when Hydrocyanic Acid Gas is the fumigant used. The inspection of the sanitary condition of the whole of the Dock area is also undertaken.

The defects to which the Inspectors draw attention are, almost invariably, promptly remedied by the Shipping Company, the Mersey Docks and Harbour Board, or other person concerned.

There is a steady improvement in the crew accommodation provided on ships. An increasing number of vessels have separate messrooms, baths and lavatories, without any reduction in the cubic space in the sleeping quarters. The crew are usually berthed aft, where much greater comfort and better lighting and ventilation are possible than in the forepart of the ship. From time to time conditions are found which are unsatisfactory from a sanitary standpoint, and which would never have been passed had the plans of the accommodation been submitted to a competent sanitarian. It is often impossible to improve the conditions without very considerable expense, and provided no actual nuisance exists, no action can be taken. But it may be asserted with confidence that frequently much better results could be obtained for the same expenditure of money and space if the plans of passenger and crew accommodation had to be passed by an expert sanitarian before their construction was commenced.

It will be noticed in the table on page 110 that the defects due to lack of cleanliness are 90·78 per cent. of all the unsatisfactory conditions reported. This is due to the fact that the crews of British ships on arrival in the home-port almost invariably leave their quarters in a very dirty condition. However good the accommodation may be, the health and comfort of the crew is still dependent on the cleanliness of the individual members, and in this respect there is still room for great improvement, a fact which is often quoted as an argument against the provision of further improvements and greater comfort in crew's quarters.

The question of bed bugs also merits serious consideration. Bugs must of course be originally introduced by some member of the crew, but once established they are exceedingly difficult to get rid of. As in the case of rats, so in bugs, the most important thing is to build so that no harbourage is provided. Wooden casings, hollow stanchions of bunks, in fact, any crevice will harbour bugs. The bug is easily killed if he can be reached by either a liquid or a gaseous poison. But even SO^2 does not reach them in every haunt, and though HCN is more effective, it requires considerably greater concentration and considerably longer exposure than is necessary for rat destruction, if all the bugs and their eggs are to be destroyed. There is a great need for a cheap, effective, and rapid method of getting rid of bugs on board ship. It is to be remembered that the difficulty is not that the bug is particularly tenacious of life, but that he hides himself in places that are almost inaccessible to any poisonous substance which has yet been tried. Hydrocyanic Acid Gas is the most effective method at present, but even so it is difficult to obtain a lethal concentration in every nook and cranny.

Diseases incident upon Sailors.

The diseases to which sailors are peculiarly liable may be classified under three headings.

(*a*) Those which are caused by the peculiar stresses of the work.

(*b*) Tropical Diseases.

(*c*) Those associated with the peculiar environment of the sailor, such as damp forecastles, the possibility of contaminated water supplies, and the close association of the sick with the healthy in the confined quarters on shipboard.

It is against the latter classes of diseases that the efforts of the Port Sanitary Authority for improving the sanitation of vessels are directed.

The defects are classified as under :—

(*a*) Faulty Construction.

(*b*) Wear and Tear.

(*c*) Lack of Cleanliness and Nuisance.

From the table facing page 110, it would at first sight appear that the conditions found on British ships were inferior to those found on foreign vessels. The explanation of this is that in regard to the British ships this is a home port and the crews are paid off on arrival, whereas the crews of foreign vessels remain on board. When a crew is paid off from a ship they almost invariably leave their quarters in a dirty and untidy condition. This accounts for the large proportion of defects and lack of cleanliness reported on British vessels. When these ships are in foreign ports and the crews living on board the cleanliness of their quarters would compare very favourably with what may be found on ships of other nationalities in this port.

Canal Boats.

The Port Sanitary Inspectors have been appointed Canal Boat Inspectors under the Canal Boats Acts, 1877 and 1884. This is rendered necessary by the large number of Canal Boats which are to be found lying in the Liverpool Docks. By rotation, one Inspector devotes one whole day per week for a period of five months at a time to this work, as it has been found that in this way it is easier to follow up any boat that may be defective. These boats are for the most part kept in very good repair.

Eight hundred and forty-two boats were inspected during the year, of which 37 were found to have some condition contravening the regulations.

INSPECTION OF SHIPPING.

Year 1923.

TABLE 10.

Nationality.	Visits.	Re-visits.	Total.
British	4,293	1,511	5,804
Norwegian ...	213	106	319
Swedish... ...	164	86	250
Spanish... ...	97	51	148
Danish	85	34	119
Japanese ...	34	16	50
Italian	20	10	30
Portugese ...	3	2	5
Russian	3	2	5
French	59	9	68
Brazilian ...	14	5	19
Dutch	69	23	92
Greek	20	13	33
American ...	145	36	181
Belgian ...	9	3	12
German	102	34	136
Chilian	—	—	—
Peruvian ...	1	1	2
Finnish	25	10	35
Jugo Slav ...	2	2	4
Lettish ...	2	—	2
Polish	—	—	—
Total ...	5,360	1,954	7,314

SUMMARY OF INSANITARY CONDITIONS.

TABLE 11.

Class of Vessels.	Number Inspected.	Number on which Nuisances were found.	Per cent.
FOREIGN—			
Steamers	3,946	529	13·40
Sailing	—	—	—
Total	3,946	529	13·40
COASTWISE—			
Steamers	1,367	44	3·21
Sailing	47	—	—
Total	1,414	44	3·11

Nationality.	Number Inspected.	Number on which Nuisances were found.
British	4,293	534
Foreign	1,067	39
	5,360	573

Nuisances arising through

Defects of Orginal Construction. (*a*)	Per cent. of Total Defects.	Structural Defects through wear and tear. (*b*)	Per cent. of Total Defects.	Dirt, and other conditions prejudicial to health.	Per cent. of Total Defects (*c*)
14	·62%	194	8·59%	2,048	90·78%

TABLE 12.

THE FOLLOWING TABLE SHOWS THE NUMBER AND NATIONALITIES OF THE VESSELS ON WHICH DEFECTS WERE DETECTED DURING THE YEAR 1923.

NATIONALITY.	Number of Ships.	Dirty Forecastles	Dirty Wash-houses, Store-houses, etc.	Foul Water Casks.	Foul Bilges.	Foul W.C's.	Accumulations of offensive refuse.	Gear stowed in Crew's Quarters.	Damp Quarters.	Water lodging on top of Forepeak Tank.	Animals kept, causing nuisance.	Leaky Decks overhead.	Defective Stoves.	Defective Bulkheads.	Defective Ports and Sky-lights.	Defective Ventilators.	Defective Flooring Boards	Defective Hatches and Lockers.	Defective Chain Pipes.	Defective Hose Pipes.	Defective W.C. Fittings.	Defective Soil Pipes.	Inadequate Ventilation.	Inadequate Lighting	Inadequate Drainage.	Bare Iron not Sheathed	W.C's. deficient in Ventilation and situation bad.	Total number of Defects.	Total Remedied.
British ...	534	1534	63	4	...	335	11	...	3	1	...	50	23	21	55	9	...	...	1	...	17	9	4	...	6	1	3	2150	2130
Norwegian ...	17	25	1	...	...	13	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	41	41
Swedish ...	8	11	3	...	...	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	24	24
Spanish ...	2	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	..	...	4	4
Italian ...	2	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	7
Japanese ...	1	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
Greek ...	4	10	...	...	...	2	...	...	...	...	...	...	...	...	4	...	1	...	1	...	...	...	...	...	...	...	...	18	10
Belgian ...	1	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
American ...	2	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	5
French ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Finn	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...
Danish ...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	..	...	...	...	1	1
German ...	1	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
Portuguese ...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	573	1594	67	4	...	368	11	...	3	1	...	50	25	21	59	9	1	...	2	...	18	9	4	...	6	1	3	2256	2228

Aliens.

The Medical Examination of Aliens under the Aliens Order, 1919, is carried out by the Assistant Port Medical Officers, who work in close co-operation with the Immigration Officers. The class of alien passengers arriving in Liverpool is not such as is likely to provide many rejections on medical grounds. The majority arrive from America, and are either on business, touring, or coming to visit relatives. No alien is allowed to take up employment in this country without a Ministry of Labour permit, consequently it is not often necessary to examine persons as to the physical fitness for their employment. The rejections are mainly lunatics, idiots and mentally deficients, and those suffering from infectious disease. But even if insufficient to warrant a rejection on medical grounds alone, the findings of the Medical Officer may be of great value to the Immigration Officer in helping him to decide whether an alien is likely to become a public charge. Financial resources may be quickly strained if the alien's health breaks down while he is in this country, and it is sometimes deemed necessary to limit him to a short visit on this account. The table following shews the number of aliens arriving in Liverpool during the year 1923, classified according to the system adopted by the Home Office.

The Eastward-bound transmigrants are clean, healthy people, who have made good in the States and are returning to their home countries for a visit or to take up permanent residence. It is unnecessary to examine them in the same way as the Westward-bound transmigrants who arrive from the Continent at our East and South Coast Ports on their way to seek their fortune in the States.

During the year 1923 there arrived at Liverpool 17,522 alien passengers. The following table shows how this total is divided amongst the various classes into which incoming aliens are grouped by the Immigration Department of the Home Office :—

Visitors on Holidays, Tourists, etc.	Business Visitors.	In transit to other Countries.	Aliens normally resident in this country and returning after being abroad.	Aliens coming to reside permanently in this country.
11,700	965	1,130	343	940

Aliens holding Ministry of Labour Permits to take up employment in this country.	Diplomats and Persons on Foreign Government Missions.	Seamen under Contract to join Ships in British Waters.	Other Seamen.	Transmigrants.
78	148	5	106	2,107

Medical Certificates were issued in regard to 21 Aliens, viz.:—On account of Lunacy, Idiocy and Mental Deficiency, 13; Infectious disease, 3; Tuberculosis, 2; Syphilis, 1; Senility, 1; and Trachoma, 1.

Verminous Persons.

Typhus Fever, which is a vermin transmitted disease, has caused the Ministry of Health and also the American Health Authorities to view the arrival of emigrants and trans-migrants from these countries en route to America with some anxiety.

The Emigration houses where these people are housed, pending the sailing of the vessel, are kept under strict supervision by the Lodging-House Inspectors; they are visited daily, and all cases of infectious illness promptly reported to the Shipping Company's doctor and the Local Health Authority. The bedding is frequently examined and attention is given to the occupation of the rooms to prevent over-crowding and to ensure cleanliness.

Supervision of Food Importations.

The inspection of imported foodstuffs under the Unsound Food and Foreign Meat Regulations is carried out by a staff of seven qualified Food Inspectors. The procedure is necessarily one of sampling in the first instance, more detailed inspection depending on the conditions of the samples. But by experience the inspectors know when unsatisfactory conditions are likely to be found, and have many sources of information open to them as they go about the docks. Consequently the control over imported foods becomes very complete without the necessity for serious inconvenience and delay to the trade.

Unsound foodstuffs are whenever possible allowed to go for industrial purposes. Great care is taken that these foods are not marketed for

human consumption, and only well known reliable firms are allowed to receive them for use in the manufacture of poultry foods, dog biscuits, etc., and for melting down for fat extraction purposes. In April, 1923, the Foreign Meat Regulations became operative in regard to imports from the Irish Free State. In August, owing to a dock strike in Ireland, perishable goods were landed many days late, and were found to be in a decomposing condition, there being no refrigeration on cross-channel steamers.

Where large consignments of food have been found unsound the cause is almost invariably some circumstance, such as faulty refrigeration, arising during the voyage. Thus one vessel discharged a cargo of frozen mutton of which a large percentage showed decomposition and black spot. This was probably due to the carcases not being frozen hard at the time of loading or being partially thawed during loading, with the result that the weight of the upper layers compressed the lower and made it impossible for the cold air to circulate properly amongst them.

Large quantities of wheat have been damaged by oil, sweating, and sea water, and though unfit for human consumption, this damaged wheat has been utilised by poultry food manufacturers.

Attention has been devoted to the possibility of the contamination of foodstuffs by arsenic carried as cargo. It has been found that the arsenic is carefully packed, and that both in ships and on quays great care is taken to separate consignments of arsenic from any foods so that there is no risk of contamination.

There has been a decline in the importation of frozen pig carcases, attributable to the fact that frozen loins, legs, shoulders, etc., of pork are now arriving from the United States bearing the necessary official certificate.

An enormous quantity of fruit is imported into Liverpool, and this trade is developing; new sources of supply being opened up, new ships being specially constructed for the trade and the methods of preservation of the cargoes being constantly improved. The condition of the fruit on arrival is in the majority of cases extremely good, but naturally, delay or breakdowns of the cooling system may result in the decomposition of large quantities, the condition of the fruit also depending on the time of the year when it is shipped, the consignments early in the season

being superior to the late arrivals. The tables on pages 115 to 126 shew the enormous amount of food which is imported and the quantities which it is necessary to destroy or utilise for industrial purposes only.

The following table shews the number and description of samples sent for examination to the City Analyst and City Bacteriologist during the year ending December, 1923 :—

TABLE 13.

CITY ANALYST.

Canned Goods—	
Peas	21
Haricot Beans	4
Tomatoes	8
Asparagus	1
Pine Apples	1
Tomatoe Puree	1
Soups	1
Spinach	1
French Beans	1
Evaporated Milk ...	26
Ham	2
Sugar Corn	1
Water	2
Tomatoe—box wood	1
Rats	7
Total ...	78

CITY BACTERIOLOGIST.

Mussels	2
Prawns	1
Crab	2
Peas	2
Wool	95
Hair	6
Hides	5
Total ...	113

The Bacteriologist reported two samples of tinned crab as containing putrefactive organisms.

Of the samples examined by the City Analyst the following were found unsatisfactory :—

7	Samples of	Tinned Evaporated Milk.	All on account of excessive metallic contamination (Tin or Copper.)
1	,,	Canned Soup.	
1	,,	Tomato Puree.	
3	,,	Canned Peas.	
2	,,	Canned Beans.	
1	,,	Canned Pineapples.	
3	,,	Canned Tomatoes.	

TABLE 14.

SHOWING THE NUMBERS OF CATTLE, SHEEP, AND SWINE EXPORTED FROM IRELAND TO LIVERPOOL DURING THE YEAR 1923, AND SHOWING THE PORTS IN IRELAND AT WHICH THE ANIMALS WERE SHIPPED.

	Cattle.	Sheep.	Swine.
Ballina	64	4,412	1,339
Bantry	1,208	—	8,422
Belfast	18,231	16,193	1,821
Cork	25,016	11,462	18,088
Drogheda	16,993	28,229	753
Dublin	63,282	69,413	19,704
Dundalk	6,589	4,906	2,025
Galway	—	—	126
Londonderry	8,289	18,420	7,276
Newry	8,858	21,556	4,215
Sligo	27	2,982	9,334
Waterford	18,941	16,941	4,452
Total	167,498	194,514	77,555

TABLE 15.

SHOWING THE TOTAL NUMBERS OF THE SEVERAL KINDS OF CATTLE, SHEEP AND PIGS EXPORTED FROM IRELAND TO LIVERPOOL DURING THE YEAR 1923.

CATTLE.	No.
Fat	126,571
Stores (for fattening)	33,877
Milch Cows	1,647
Springers	182
Calves	5,221
Total Cattle ...	167,498

SHEEP.	No.
Fat	89,592
Stores	—
Lambs	104,922
Total Sheep ...	194,514

PIGS.	
Fat	77,255
Stores	300
Total Swine ...	77,555

TABLE 16.

STATEMENT SHOWING THE NUMBER OF LIVE CATTLE, &c., LANDED AND SLAUGHTERED AT THE FOREIGN ANIMALS WHARF (BIRKENHEAD, ALFRED AND WALLASEY LAIRAGES) DURING THE YEARS 1905 to 1923 INCLUSIVE.

Year.	Landed.				Slaughtered.			
	Oxen.	Calves.	Pigs.	Sheep, Lambs and Goats.	Oxen.	Calves.	Pigs.	Sheep, Lambs and Goats.
1905	276,725	5	—	160,105	276,273	4	—	163,705
1906	270,853	5	—	94,948	270,245	5	—	95,250
1907	214,061	2	—	97,688	215,821	2	—	94,714
1908	180,283	—	—	76,334	179,872	—	—	79,315
1909	148,233	2	—	8,053	147,812	2	—	8,053
1910	89,613	3	—	304	90,430	—	—	304
1911	78,232	2	—	40,338	79,215	1	—	39,314
1912	19,167	--	—	14,251	19,167	—	—	14,251
	143,114	**819**	**69,016**	**335,291**	**140,854**	**810**	**67,586**	**334,880**
1913	3,482	—	—	—	3,482	—	—	—
	351,276	**930**	**104,274**	**449,344**	**90,857**	**174**	**15,498**	**131,241**
1914	—	—	—	1,707	—	—	—	1,707
	333,115	**248**	**65,242**	**357,528**	**171,716**	**121**	**16,876**	**158,562**
1915	**235,620**	—	**60,791**	**288,260**	**100,560**	—	**2,353**	**94,237**
1916	**270,117**	**2**	**84,509**	**377,753**	**137,346**	—	**2,210**	**134,794**
1917	**257,781**	**14**	**48,013**	**424,992**	**127,436**	**4**	**655**	**171,720**
1918	**178,898**	**17**	**28,723**	**446,039**	**102,174**	—	**409**	**219,915**
1919	**252,790**	**977**	**29,052**	**362,137**	**175,302**	—	**591**	**241,247**
1920	**247,015**	**6,230**	**31,050**	**341,350**	**110,688**	**9**	**569**	**164,669**
1921	**195,785**	—	**19,224**	**325,982**	**63,178**	—	**2,766**	**165,963**
	49,434	—	—	6,706	49,224	—	—	6,706
1922	**262,601**	**8**	**31,257**	**418,604**	**63,002**	**1**	**515**	**153,381**
	38,648	1	—	—	38,648	1	—	—
1923	**166,994**	**7**	**77,536**	**194,296**	**50,432**	—	**4,886**	**90,736**
	39,690	—	—	7,003	37,482	—	—	7,003

Ordinary type represents Foreign. Heavy type represents Irish.

TABLE 17.

SHOWING THE VALUES OF THE IMPORTS OF MEATS (EXCEPT POULTRY AND GAME) INTO THE PORT OF LIVERPOOL DURING THE YEARS 1916, to 1922.

Description.	Years.						
	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	£	£	£	£	£	£	£
Bacon	15,827,493	18,181,829	36,832,954	38,708,464	21,746,024	13,472,791	8,819,177
Beef, fresh and refrigerated ...	8,880,454	8,297,884	16,470,701	11,916,393	17,754,543	13,430,866	8,016,721
Beef, salted...	67,426	86,563	66,238	180,015	—	—	—
Hams	4,114,569	3,983,618	6,843,531	7,404,202	109,461	4,225,544	5,148,303
Mutton, fresh and refrigerated ...	2,751,913	2,116,322	2,128,352	2,219,436	5,702,678	5,842,010	4,262,439
Pork, fresh and refrigerated ...	966,652	469,406	424,056	310,654	1,639,590	920,772	419,018
Pork, salted	85,791	56,604	17,544	100,808			
Rabbits	168,667	180,106	123,468	143,983	342,821	95,873	65,563
Unenumerated, fresh, refrigerated and salted	1,101,843	1,214,946	930,022	2,588,273	973,877	678,012	581,442
Preserved, otherwise than by salting	3,663,457	6,160,807	9,443,132	13,012,291	2,638,774	1,253,263	
Totals	£37,628,265	£40,748,085	£73,279,998	£76,584,519	£50,907,768	£39,919,131	£27,312,663

TABLE 18.

SHOWING THE QUANTITY OF UNSOUND MEATS SUPERVISED AND UTILISED DURING THE YEARS 1911 TO 1923.

Year.	Beef.				Mutton.				Pork.			
	Tons.	cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.
1911	659	10	2	24	18	7	0	13	6	4	2	20
1912	684	8	3	0	475	12	1	2	9	12	3	18
1913	88	0	3	12	76	16	0	13	1	4	2	15
1914	441	5	2	0	47	5	2	2	1	5	0	2
1915	221	7	0	10	23	14	0	4	2	8	3	21
1916	103	16	0	13	4	10	0	24	1	14	1	16
1917	510	9	3	14	24	11	3	20	0	14	3	16
1918	281	9	0	25	55	15	0	22	4	14	1	4
1919	150	12	3	22	45	18	0	16	—	8	0	8
1920	30	8	2	23	95	8	0	6	—	16	0	16
1921	25	14	2	19	8	13	0	8	1	9	2	22
1922	44	18	1	19	10	9	1	8	2	12	1	18
1923	28	5	3	10	33	9	3	31	—	16	1	9

TABLE 19.

SHOWING THE QUANTITY OF UNSOUND OFFAL SUPERVISED AND UTILISED DURING THE YEARS 1911 TO 1923.

Year.	Beef.	Mutton.	Pork.	Veal.
1911.....	32,816 pieces.	56,596 pieces.	8,629 pieces.	1,070 pieces.
1912.....	68,272 ,,	57,163 ,,	8,229 ,,	196 ,,
1913.....	28,055 ,,	66,705 ,,	12,946 ,,	64 ,,
1914.....	36,561 ,,	41,298 ,,	1,919 ,,	44 ,,
1 915.....	55,219 ,,	185,551 ,,	5,644 ,,	233 ,,
1916.....	63,900 ,,	126,110 ,,	2,765 ,,	15 ,,
1917.....	39,466 ,,	13,212 ,,	12,460 ,,	946 ,,
1918.....	27,216 ,,	51,755 ,,	24 ,,	—
1919.....	103,613 ,,	61,844 ,,	76,814 ,,	19 ,,
1920.....	207,412 ,,	358,744 ,,	261 ,,	722 ,,
1921.....	31,695 ,,	32,989 ,,	3,699 ,,	100 ,,
1922.....	30,794 ,,	26,991 ,,	5,129 ,,	15 ,,
1923.....	20,309 ,,	11,401 ,,	962 ,,	23 ,,

TABLE 20.

SHOWING THE QUANTITY AND DESCRIPTION OF OFFAL CONDEMNED DURING THE YEAR 1923.

Name of Organ.	Beef.		Mutton.		Pork.		Veal.	
	Number.	Weight, Pounds.	Number.	Weight, Pounds.	Number.	Weight, Pounds.	Number.	Weight, Pounds.
Livers	3,136	40,456	196	103	71	163	23	81
Kidneys	12,388	12,492	3,378	402	46	16	—	—
Tripe	240	2,007	—	—	136	224	—	—
Skirts	434	1,232	400	50	—	—	—	—
Hearts	648	2,070	742	296	—	—	—	—
Tongues	88	381	344	87	1	1	—	—
Tails	177	262	—	—	—	—	—	—
Heads	—	—	—	—	35	319	—	—
Lungs	—	—	—	—	—	—	—	—
Cheeks	687	1,381	—	—	—	—	—	—
Feet	599	2,042	6,120	3,170	—	—	—	—
Udders	1,878	7,347	—	—	673	4,634	—	—
Plucks	—	—	91	233	—	—	—	—
Brains	34	70	—	—	—	—	—	—
Sweetbreads	—	—	130	16	—	—	—	—
Totals	20,309	69,740	11,401	4,357	962	5,357	23	81

TABLE 21.

TABLE SHOWING THE QUANTITY AND DESCRIPTION OF UNSOUND MEATS SUPERVISED* DURING THE YEAR 1923.

Description.	Total Weight.				Cause of Destruction.											
					Tubercular.				Brine Stained, Mouldy and Decomposed.				Other causes. (Emaciation, Dropsy and Pleurisy).			
	Tons	cwts.	qrs.	lbs.	Tons	cwts.	qrs.	lbs.	Tons	cwts.	qrs.	lbs.	Tons	cwts.	qrs.	lbs.
Beef	28	5	3	10		—			26	8	3	11	1	16	3	27
Mutton	33	9	3	21		—			33	8	3	2	0	1	0	19
Pork	0	16	1	9	0	1	0	1	0	14	3	9	0	0	1	27
Veal	0	0	0	25		—			0	0	0	25		—		
Total	62	12	1	9	0	1	0	1	60	12	2	19	1	18	2	17

* These were destroyed or allowed to go for industrial purposes to the satisfaction of the Medical Officer.

TABLE 22.

SHOWING QUANTITIES OF UNSOUND GENERAL FOOD-STUFFS SUPERVISED AND UTILISED DURING THE YEAR 1923.

Description.	No. of Tins.	Weight in Pounds.	Description.	No. of Tins.	Weight in Pounds.
Canned Goods—			Peas	931	1524
Apples ...	2338	14059	Ham	8	80
Apricots ...	6524	10345	Beef	34996	222159
Apricot Pulp ...	2123	15199	Mutton ...	347	2082
Orange Pulp. ...	30	330	Soups... ...	131	131
Peaches ...	876	2079	Ox Tongues ...	1728	10329
Peach Pulp ...	—	—	Ox Tails ...	44	88
Pears	2125	3603	Lobsters ...	159	159
Pear Pulp ...	978	5868	Anchovies ...	620	2883
Pine Apple ...	54421	84980	Sardines ...	17936	11179
Plums	—	—	Salmon ...	—	—
Black Currant Pulp...	31	1034	Crab	13083	10176
Tomatoe Pulp...	272	1144	Prawns ...	3175	2521
Tomatoes ...	12294	32779	Milk Condensed.	56784	56784

Description.	Packages.	Weight.			
		Tons.	Cwts.	Qrs.	Lbs.
Fruit (Fresh)—					
Apples	1877	36	9	2	16
Melons	59	3	7	1	0
Melons, loose	—	5	0	0	0
Pears	2,124	25	9	2	7
Bananas...	1,953	102	10	1	26
Grapes	154	7	19	3	8
Tomatoes	590	6	2	0	22

TABLE 22—*continued.*

Description.	Packages.	Weight.			
		Tons.	Cwts.	Qrs.	Lbs.
Fruit (Fresh) *continued*—					
Lemons	203	6	19	0	14
,, loose	—	31	0	0	0
Oranges	3,459	156	15	0	10
,, loose	—	106	0	0	0
Cocoanuts	17	0	18	2	10
Cherries...	30	2	5	0	0
Plums	1,039	32	17	3	11
Pea Nuts	18	1	1	0	0
Walnuts	263	9	11	0	12
Peaches	13	0	2	1	8
Brazil Nuts, loose	—	0	9	0	0
Fruit (Dried)—					
Figs	5	0	5	0	0
Currants, ...	48	0	19	1	4
Raisins	33	0	8	1	0
Prunes...	241	4	5	1	18
Vegetables—					
Potatoes...	1072	64	5	0	0
Onions	257	19	8	1	26
,, loose	—	2	8	0	0
Turnips	115	5	14	0	0
,, loose	—	5	0	0	0
Mushrooms	—	0	1	2	0

TABLE 22—*continued.*

Description.	Packages.	Weight.			
		Tons.	Cwts.	Qrs.	Lbs.
Cereals—					
Wheat	—	2370	14	3	3
Maize	—	656	4	1	9
Oats	—	54	15	3	25
Barley	—	1	16	1	14
Peas	—	62	1	2	8
Flour	—	264	2	3	11
Rice	—	28	19	1	5
Corn Flour	27	1	13	0	14
Sago Flour	75	3	14	3	24
General—					
Bacon	11	4	7	3	7
,, loose	—	0	1	1	26
Poultry	Single 86	0	2	0	17
Rabbits	Single 297	0	6	1	9
Hares	Single 3	0	0	0	17
Fish—					
Salmon	Single 1	0	0	0	24
Ling	Single 119	0	4	1	0
Kippers	51	0	4	2	4
Bloaters...	4	0	0	1	11
Pickled Herring	10	1	0	0	0
Red Herring	14	0	13	2	23
Soles	1	0	0	2	9
Haddock	8	0	1	0	8

TABLE 22—*continued.*

Description.	Packages.	Weight.			
General—*continued.*		Tons.	Cwts.	Qrs.	Lbs.
Escallops	11	—	11	0	0
Liquid Eggs	90	3	0	0	23
Macaroni	30	—	12	3	12
Cheese	—	—	2	1	19
Biscuits	602	9	6	0	12
Sausage	9	—	0	2	18
Shredded Wheat	Cartons 4,905	1	12	3	11

TABLE 23.

SHOWING THE TOTAL QUANTITIES OF THE DIFFERENT UNSOUND FOODSTUFFS SUPERVISED DURING THE YEAR 1923.

	Tons.	Cwts.	Qrs.	Lbs.
Beef, Mutton, Pork and Veal...	62	12	1	9
Offal (Beef, Mutton, etc.) ...	35	10	0	5
Canned Goods...	219	8	2	23
Fruit and Vegetables	637	12	3	24
Cereals	3,444	3	1	1
General (Fish, Poultry, Rabbits, etc.)	22	8	2	26
	4,421	16	0	4

TABLE 24.

Showing comparative Value of the more important Food Stuffs imported at the principal Ports during the year 1922.

	London. 1	Liverpool. 2	Hull. 3	Harwich. 4	Bristol. 5	Glasgow. 6	Manchester. 7	Newcastle. 8	Leith. 9	Southampton. 10
	£	£	£	£	£	£	£	£	£	£
Animals	34,978	—	8,293	—	—	—	—	—	—	—
Butter	18,713,928	1,066,440	2,389,933	2,995,574	232,686	169,127	80,541	2,768,012	2,446,366	1,488,469
Cheese	8,440,809	1,581,368	117,750	185,449	802,840	237,436	234,511	164,930	269,486	78,875
Cocoa	2,077,678	1,766,679	14,370	258,892	22,352	9,666	—	15,069	100,544	6,472
Coffee	3,963,715	45,817	—	—	403,259	—	—	215	—	8,870
Grain	25,260,377	18,459,287	12,901,411	33,627	9,165,028	6,485,770	7,395,118	2,060,036	3,846,252	464,753
Eggs	6,217,721	1,820,362	952,851	1,135,262	6,486	566,131	239,677	1,045,510	1,009,926	282,694
Fish	2,386,662	3,544,971	566,898	655,283	36,153	48,184	10.614	339,415	206,104	290,936
Fruit	16,012,969	10,897,999	2,159,906	299,028	2,751,216	2,308,071	1,631,730	514,430	313,229	1,836,834
Lard	1,732,735	3,161,810	532,904	18,166	470,852	234,337	700,131	405,908	100,089	143,708
Margarine	1,090,195	635,309	1,392,282	737,074	—	—	71,593	281,969	456,877	—
MEAT :—										
Bacon	4,825,736	8,819,177	2,484,017	11,735,391	528,233	282,618	73,077	2,436,032	209,656	2,194,221
Beef	15,744,941	8,016,721	88,550	—	56,955	364,681	138,941	504,232	—	946,871
Hams	935,636	5,148,303	—	—	261,071	1,566,647	120,001	—	—	182,508
Mutton	17,014,054	4,262,439	73,407	238,724	221,317	109,674	274,964	—	—	121,440
Pork	869,906	419,018	—	245,708	—	—	—	—	—	—
Rabbits	358,408	65,563	—	—	—	—	2,600	—	—	—
Unenumerated / Preserved	3,833,706	581,442	493,370	629,540	63,263	193,878	—	384,843	372,754	51,399
Milk, Condensed	4,044,820	616,445	643,635	7,676	90,850	18,025	342,652	368,050	160,759	15,477
Poultry and Game	523,497	329,797	21,475	105,863	—	—	—	—	—	215,789
Sugar	16,268,614	11,905,222	1,610,350	—	1,586,163	1,160,209	1,346,480	720,821	801,783	175,237
Vegetables	3,682,775	2,106,761	1,346,789	296,343	110,129	232,657	442,374	213,597	239,171	1,706,372

EMIGRATION.

There was a marked increase in the number of emigrants leaving the Port of Liverpool during the year 1923, the number being 159,874, an increase of 39,183 compared with the previous year, when the number of emigrants leaving the Port was 120,691.

The following is a return of the number of emigrants and clearances of ships, including those passenger vessels in which medical inspection was not required, from 1901-1923 :—

TABLE 25.

In 1901,	167,452	Emigrants, and	761	Clearances of Ships.
,, 1902,	214,113	,,	791	,,
,, 1903,	265,918	,,	902	,,
,, 1904,	274,584	,,	924	,,
,, 1905,	277,536	,,	983	,,
,, 1906,	352,818	,,	1,090	,,
,, 1907,	385,797	,,	1,102	,,
,, 1908,	212,155	,,	1,113	,,
,, 1909,	253,400	,,	1,117	,,
,, 1910,	336,088	,,	1,149	,,
,, 1911,	312,027	,,	1,153	,,
,, 1912,	323,187	,,	1,165	,,
,, 1913,	347,541	,,	1,199	,,
,, 1914,	232,954	,,	1,065	,,
,, 1915,	75,387	,,	677	,,
,, 1916,	58,749	,,	562	,,
,, 1917,	18,908	,,	379	,,
,, 1918,	13,588	,,	287	,,
,, 1919,	120,187	,,	673	,,
,, 1920,	204,868	,,	769	,,
,, 1921,	161,132	,,	714	,,
,, 1922,	120,691	,,	804	,,
,, 1923,	159,874	,,	850	,,

The following Tables, Nos. 26 and 27, relating to Emigration have been kindly supplied by the Board of Trade.

TABLE 26.

Statement showing the number of Passengers (Emigrants and others), distinguishing British subjects and Aliens, who left the Port of Liverpool for places out of Europe in the year 1923 :—

Destination.	British Subjects.	Aliens.	Total.
British North America ...	51,963	19,815	71,778
Australia and New Zealand	3,092	51	3,143
British South Africa ...	1,437	24	1,461
India (including Ceylon)...	5,184	284	5,468
Other British Colonies and Possessions ...	5,536	336	5,872
Total British Empire ...	67,212	20,510	87,722
United States	43,289	20,780	64,069
Other Foreign Countries	7,182	901	8,083
Total Foreign Countries...	50,471	21,681	72,152
Grand Total ...	117,683	42,191	159,874

TABLE 27.

Number of Passengers (Emigrants and others), distinguishing British subjects and Aliens, as given in Table No. 26, who left the Port of Liverpool in each month of the year 1923 :—

Month.	British Subjects.	Aliens.	Total.
January	4,089	1,376	5,465
February	4,887	1,285	6,172
March	10,456	2,372	12,828
April	11,743	2,513	14,256
May	5,750	2,080	7,830
June	12,919	3,066	15,985
July	11,815	3,687	15,502
August	19,760	7,389	27,149
September	14,744	7,120	21,864
October	12,794	5,009	17,803
November	5,559	4,239	9,798
December	3,167	2,055	5,222
Total	117,683	42,191	159,874

Emigrant Inspections.

All emigrants travelling second class or steerage on board vessels outward bound are subject to inspection by the Medical Officers of the Board of Trade, Dr. Tinker and Dr. Rentoul. The crews of all such vessels bound for America are also subjected to inspection by these officers. An Inspector of the Port Sanitary Authority attends these clearances in order to supervise the removal of all persons who may be rejected on account of actual or suspected infectious disease.

There were 107 such inspections, and 8 persons were rejected on account of infectious disease.

TABLE 28.

Date 1923.	Name of Vessel.	Nature of Sickness.	Where taken to	Description of Patient.
Jan. 23	**Montcalm** ...	Ringworm ...	Brownlow Hill	Adult
,, 23	**Montcalm** ...	Measles ...	Grafton Street	Child
April 28	**Adriatic** ...	Temperature ...	Returned Home to Bootle	Adult
July 20	**Regina** ...	Chicken-pox ...	Sparrow Hall	Infant
Aug. 17	**Montrose** ...	Chicken-pox ...	Sparrow Hall	Infant
Sept. 22	**Celtic** ...	Conjunctivitis ...	Returned Home	Adult
Nov. 3	**Canada** ...	Chicken-pox ...	Fazakerley	Infant
,, 24	**California** ...	Chicken-pox (?) ...	Returned Home	Adult

The numbers of Transmigrants notified from other Port Sanitary Authorities, or discovered upon examination in Liverpool to be suffering from "Trachoma" or "Conjunctivitis," from January 1st to December 31st, 1923, were :—

Case under treatment, 1/1/23	1
Cases notified from Hull	495
,, ,, ,, Southampton	1
,, ,, ,, Folkestone	2
	499
Discovered by the Medical Officers attached to the various Steamship Companies	53
Total number of cases ...	552
Number of above who sailed for U.S.A. and Canada ...	480
,, ,, ,, were returned home	23
,, ,, diverted to other Ports	47
,, ,, under treatment in Liverpool ...	2
	552

The Medical Officer to the Port Sanitary Authority desires to express his appreciation of the valuable assistance received from H.M. Collector of Customs and Staff, the Mersey Docks and Harbour Board and their Officers, and the various Shipping Companies who have co-operated with the Port Sanitary Authority in preventing disease, and have worked harmoniously together in every particular. The Consular Body have at all times given courteous assistance.

E. W. HOPE, M.D.

Municipal Offices,
Liverpool.
1*st July*, 1924.